

Lampiran 1

Perhitungan biaya persediaan metode perusahaan

➤ Bahan Baku Rokok (Tembakau) :

- September 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 8.110 x Rp. 750 = Rp.6.082.500

Biaya Pembelian = Pembelian x harga beli
= 11.648 x Rp. 50.000 = Rp.582.400.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.6.082.500+ Rp.582.400.000
= Rp.589.107.500

- Oktober 2018

Biaya pemesanan = Tidak Ada Pemesanan =0

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 2.991 x Rp. 750 = Rp.2.242.500

Biaya Pembelian = Pembelian x harga beli
= 0 x Rp. 50.000 = Rp. 0

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= 0 + Rp.2.242.500 + Rp. 0
= Rp.2.242.500

- November 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 1.144 x Rp. 750 = Rp.857.250

Biaya Pembelian = Pembelian x harga beli
= 4.320 x Rp. 50.000 = Rp.216.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.857.250 + Rp.216.000.000
= Rp.217.482.250

- Desember 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 2.622 x Rp. 750 = Rp.1.965.750

Biaya Pembelian = Pembelian x harga beli
= .10.670 x Rp. 50.000 = Rp.533.500.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.1.965.750 + Rp.533.500.000
= Rp.536.090.750

- Januari 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 2.000 x Rp. 750 = Rp.1.499.250

Biaya Pembelian = Pembelian x harga beli
= 5.670 x Rp. 50.000 = Rp.283.500.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.1.499.250 + Rp.283.500.000
= Rp.285.624.250

- Februari 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 10.949 x Rp. 750 = Rp.8.210.250

Biaya Pembelian = Pembelian x harga beli
= 9.754 x Rp. 50.000 = Rp.487.700.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.8.210.250 + Rp.487.700.000
= Rp.496.535.250

- Maret 2019

Biaya pemesanan = Tidak Ada Pemesanan = 0

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 6.527 x Rp. 750 = Rp.4.894.500

Biaya Pembelian = Pembelian x harga beli
= 0 x Rp. 50.000 = Rp. 0

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 0 + Rp.4.894.500 + Rp. 0
= Rp.4.894.500

- April 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 8.608 x Rp. 750 = Rp.6.455.250

Biaya Pembelian = Pembelian x harga beli
= 10.320 x Rp. 50.000 = Rp.516.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.6.455.250 + Rp.516.000.000
= Rp.523.080.250

- Mei 2019

Biaya pemesanan = Tidak Ada Pemesanan = 0

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 3.138 x Rp. 750 = Rp.2.352.750

Biaya Pembelian = Pembelian x harga beli
= 0 x Rp. 50.000 = Rp. 0

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 0 + Rp.2.352.750 + Rp. 0
= Rp.2.352.750

- Juni 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 5.078 x Rp. 750 = Rp.3.807.750

Biaya Pembelian = Pembelian x harga beli
= 4.390 x Rp. 50.000 = Rp.219.500.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.3.807.750 + Rp.219.500.000
= Rp.223.932.750

- Juli 2019

Biaya pemesanan = Tidak ada pemesanan = Rp. 0

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 4.299 x Rp. 750 = Rp.3.224.250

Biaya Pembelian = Pembelian x harga beli
= 0 x Rp. 50.000 = Rp. 0

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 0 + Rp.3.224.250 + Rp. 0
= Rp.3.224.250

- Agustus 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan
= 4.335 x Rp. 750 = Rp.3.250.500

Biaya Pembelian = Pembelian x harga beli
= 6.540 x Rp. 50.000 = Rp.327.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 625.000 + Rp.3.250.500 + Rp.327.000.000
= Rp.330.875.500

➤ Bahan Baku Rokok (Cengkeh):

- September 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 3.427 x Rp. 1.950 = Rp.6.682.650

Biaya Pembelian = Pembelian x harga beli
= 5.550 x Rp. 130.000 = Rp. 721.500.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.6.682.650+ Rp. 721.500.000
= Rp.728.457.650

- Oktober 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 4.356 x Rp. 1.950 = Rp.8.492.250

Biaya Pembelian = Pembelian x harga beli
= 4.000 x Rp. 130.000 = Rp. 520.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.8.492.250 + Rp. 520.000.000
= Rp.528.767.250

- November 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 4.156 \times \text{Rp. } 1.950 = \text{Rp. } 8.102.250\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 3.500 \times \text{Rp. } 130.000 = \text{Rp. } 455.000.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 8.102.250 + \text{Rp. } 455.000.000 \\ &= \text{Rp. } 463.377.250\end{aligned}$$

- Desember 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 4.640 \times \text{Rp. } 1.950 = \text{Rp. } 9.048.000\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 6.000 \times \text{Rp. } 130.000 = \text{Rp. } 780.000.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 9.048.000 + \text{Rp. } 780.000.000 \\ &= \text{Rp. } 789.323.000\end{aligned}$$

- Januari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 5.465 \times \text{Rp. } 1.950 = \text{Rp. } 10.656.750\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 4.600 \times \text{Rp. } 130.000 = \text{Rp. } 598.000.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 10.656.750 + \text{Rp. } 598.000.000 \\ &= \text{Rp. } 608.931.750\end{aligned}$$

- Februari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 6.532 \times \text{Rp. } 1.950 = \text{Rp. } 12.737.400\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 1.550 \times \text{Rp. } 130.000 = \text{Rp. } 201.500.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 12.737.400 + \text{Rp. } 201.500.000 \\ &= \text{Rp. } 214.512.400\end{aligned}$$

- Maret 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 4.879 \times \text{Rp. } 1.950 = \text{Rp. } 9.514.050\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 1.000 \times \text{Rp. } 130.000 = \text{Rp. } 130.000.000\end{aligned}$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 275.000 + \text{Rp. } 9.514.050 + \text{Rp. } 130.000.000$$

$$= \text{Rp. } 139.789.050$$

- April 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 4.936 \times \text{Rp. } 1.950 = \text{Rp. } 9.623.250 \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 5.000 \times \text{Rp. } 130.000 = \text{Rp. } 650.000.000 \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 9.623.250 + \text{Rp. } 650.000.000 \\ &= \text{Rp. } 659.898.250 \end{aligned}$$

- Mei 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 2.653 \times \text{Rp. } 1.950 = \text{Rp. } 5.173.350 \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 1.000 \times \text{Rp. } 130.000 = \text{Rp. } 130.000.000 \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp. } 5.173.350 + \text{Rp. } 130.000.000 \\ &= \text{Rp. } 135.448.350 \end{aligned}$$

- Juni 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 2.684 x Rp. 1.950 = Rp.5.231.850

Biaya Pembelian = Pembelian x harga beli
= 1.500 x Rp. 130.000 = Rp.195.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.5.231.850 + Rp.195.000.000
= Rp.200.506.850

- Juli 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 3.216 x Rp. 1.950 = Rp.6.271.200

Biaya Pembelian = Pembelian x harga beli
= 1.000 x Rp. 130.000 = Rp.130.000.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.6.271.200 + Rp.130.000.000
= Rp.136.546.200

- Agustus 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan

$$= 3.314 \times \text{Rp. } 1.950 = \text{Rp.}6.460.350$$

Biaya Pembelian = Pembelian x harga beli

$$= 4.000 \times \text{Rp. } 130.000 = \text{Rp.}520.000.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 275.000 + \text{Rp.}6.460.350 + \text{Rp.}520.000.000$$

$$= \text{Rp.}526.735.350$$

➤ Bahan Baku Rokok (Saos):

- September 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 58 \times \text{Rp. } 3.330 = \text{Rp.}193.140$$

Biaya Pembelian = Pembelian x harga beli

$$= 150 \times \text{Rp. } 222.000 = \text{Rp. } 33.300.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}193.140 + \text{Rp. } 33.300.000$$

$$= \text{Rp.}33.618.140$$

- Oktober 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 75 \times \text{Rp. } 3.330 = \text{Rp.}249.750$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 150 \times \text{Rp. } 222.000 = \text{Rp. } 33.300.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 249.750 + \text{Rp. } 33.300.000 \\ &= \text{Rp. } 33.674.750\end{aligned}$$

- November 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 115 \times \text{Rp. } 3.330 = \text{Rp. } 382.950\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 200 \times \text{Rp. } 222.000 = \text{Rp. } 44.400.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 382.950 + \text{Rp. } 44.400.000 \\ &= \text{Rp. } 44.907.950\end{aligned}$$

- Desember 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 176 \times \text{Rp. } 3.330 = \text{Rp. } 586.080\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 300 \times \text{Rp. } 222.000 = \text{Rp. } 66.600.000\end{aligned}$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 125.000 + \text{Rp. } 586.080 + \text{Rp. } 66.600.000$$

$$= \text{Rp. } 67.311.080$$

- Januari 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 212 \times \text{Rp. } 3.330 = \text{Rp. } 705.960 \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 200 \times \text{Rp. } 222.000 = \text{Rp. } 44.400.000 \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 705.960 + \text{Rp. } 44.400.000 \\ &= \text{Rp. } 45.230.960 \end{aligned}$$

- Februari 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 341 \times \text{Rp. } 3.330 = \text{Rp. } 1.135.530 \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 150 \times \text{Rp. } 222.000 = \text{Rp. } 33.300.000 \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 1.135.530 + \text{Rp. } 33.300.000 \\ &= \text{Rp. } 34.560.530 \end{aligned}$$

- Maret 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan
= 326 x Rp. 3.330 = Rp.1.085.580

Biaya Pembelian = Pembelian x harga beli
= 100 x Rp. 222.000 = Rp. 22.200.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 125.000 + Rp.1.085.580 + Rp. 22.200.000
= Rp.23.410.580

- April 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan
= 162 x Rp. 3.330 = Rp.539.460

Biaya Pembelian = Pembelian x harga beli
= 50 x Rp. 222.000 = Rp. 11.100.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 125.000 + Rp.539.460 + Rp. 11.100.000
= Rp.11.764.460

- Mei 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 120 \times \text{Rp. } 3.330 = \text{Rp.}399.600$$

Biaya Pembelian = Pembelian x harga beli

$$= 100 \times \text{Rp. } 222.000 = \text{Rp. } 22.200.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}399.600 + \text{Rp. } 22.200.000$$

$$= \text{Rp.}22.724.600$$

- Juni 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 156 \times \text{Rp. } 3.330 = \text{Rp.}519.480$$

Biaya Pembelian = Pembelian x harga beli

$$= 100 \times \text{Rp. } 222.000 = \text{Rp. } 22.200.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}519.480 + \text{Rp. } 22.200.000$$

$$= \text{Rp.}22.844.480$$

- Juli 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 286 \times \text{Rp. } 3.330 = \text{Rp.}952.380$$

Biaya Pembelian = Pembelian x harga beli

$$= 150 \times \text{Rp. } 222.000 = \text{Rp. } 33.300.000$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 952.380 + \text{Rp. } 33.300.000 \\ &= \text{Rp. } 34.377.380 \end{aligned}$$

- Agustus 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 317 \times \text{Rp. } 3.330 = \text{Rp. } 1.055.610 \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 200 \times \text{Rp. } 222.000 = \text{Rp. } 44.400.000 \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp. } 1.055.610 + \text{Rp. } 44.400.000 \\ &= \text{Rp. } 45.580.610 \end{aligned}$$

LAMPIRAN 2

- Perhitungan *cummulative demand* tembakau:

$$Q_{1:1} = D_1 = 3.538$$

$$Q_{1:2} = Q_{1:1} + D_2 = 3.538 + 5.120 = 8.658$$

$$Q_{1:3} = Q_{1:2} + D_3 = 8.658 + 6.167 = 14.825$$

$$Q_{1:4} = Q_{1:3} + D_4 = 14.825 + 9.192 = 24.017$$

$$Q_{1:5} = Q_{1:4} + D_5 = 24.017 + 6.292 = 30.309$$

$$Q_{1:6} = Q_{1:5} + D_6 = 30.309 + 806 = 31.115$$

$$Q_{1:7} = Q_{1:6} + D_7 = 31.115 + 4.421 = 35.536$$

$$Q_{1:8} = Q_{1:7} + D_8 = 35.536 + 8.239 = 43.775$$

$$Q_{1:9} = Q_{1:8} + D_9 = 43.775 + 5.470 = 49.245$$

$$Q_{1:10} = Q_{1:9} + D_{10} = 49.245 + 2.450 = 51.695$$

$$Q_{1:11} = Q_{1:10} + D_{11} = 51.695 + 778 = 52.473$$

$$Q_{1:12} = Q_{1:11} + D_{12} = 52.473 + 6.505 = 58.978$$

$$Q_{2:2} = D_2 = 5.120$$

$$Q_{2:3} = Q_{2:2} + D_3 = 5.120 + 6.167 = 11.287$$

$$Q_{2:4} = Q_{2:3} + D_4 = 11.287 + 9.192 = 20.479$$

$$Q_{2:5} = Q_{2:4} + D_5 = 20.479 + 6.292 = 26.771$$

$$Q_{2:6} = Q_{2:5} + D_6 = 26.771 + 806 = 27.577$$

$$Q_{2:7} = Q_{2:6} + D_7 = 27.577 + 4.421 = 31.998$$

$$Q_{2:8} = Q_{2:7} + D_8 = 31.998 + 8.239 = 40.237$$

$$Q_{2:9} = Q_{2:8} + D_9 = 40.237 + 5.470 = 45.707$$

$$Q_{2:10} = Q_{2:9} + D_{10} = 45.707 + 2.450 = 48.157$$

$$Q_{2:11} = Q_{2:10} + D_{11} = 48.157 + 778 = 48.935$$

$$Q_{2:12} = Q_{2:11} + D_{12} = 48.935 + 6.505 = 55.440$$

$$Q_{3:3} = D_3 = 6.167$$

$$Q_{3:4} = Q_{3:3} + D_4 = 6.167 + 9.192 = 15.359$$

$$Q_{3:5} = Q_{3:4} + D_5 = 15.359 + 6.292 = 21.651$$

$$Q_{3:6} = Q_{3:5} + D_6 = 21.651 + 806 = 22.457$$

$$Q_{3:7} = Q_{3:6} + D_7 = 22.457 + 4.421 = 26.878$$

$$Q_{3:8} = Q_{3:7} + D_8 = 26.878 + 8.239 = 35.117$$

$$Q_{3:9} = Q_{3:8} + D_9 = 35.117 + 5.470 = 40.587$$

$$Q_{3:10} = Q_{3:9} + D_{10} = 40.587 + 2.450 = 43.037$$

$$Q_{3:11} = Q_{3:10} + D_{11} = 43.037 + 778 = 43.815$$

$$Q_{3:12} = Q_{3:11} + D_{12} = 43.815 + 6.505 = 50.320$$

$$Q_{4:4} = D_4 = 9.192$$

$$Q_{4:5} = Q_{4:4} + D_5 = 9.192 + 6.292 = 15.484$$

$$Q_{4:6} = Q_{4:5} + D_6 = 15.484 + 806 = 16.290$$

$$Q_{4:7} = Q_{4:6} + D_7 = 16.290 + 4.421 = 20.711$$

$$Q_{4:8} = Q_{4:7} + D_8 = 20.711 + 8.239 = 28.950$$

$$Q_{4:9} = Q_{4:8} + D_9 = 28.950 + 5.470 = 34.420$$

$$Q_{4:10} = Q_{4:9} + D_{10} = 34.420 + 2.450 = 36.870$$

$$Q_{4:11} = Q_{4:10} + D_{11} = 36.870 + 778 = 37.648$$

$$Q_{4:12} = Q_{4:11} + D_{12} = 37.648 + 6.505 = 44.153$$

$$Q_{5:5} = D_5 = 6.292$$

$$Q_{5:6} = Q_{5:5} + D_6 = 6.292 + 806 = 7.098$$

$$Q_{5:7} = Q_{5:6} + D_7 = 7.098 + 4.421 = 11.519$$

$$Q_{5:8} = Q_{5:7} + D_8 = 11.519 + 8.239 = 19.758$$

$$Q_{5:9} = Q_{5:8} + D_9 = 19.758 + 5.470 = 25.228$$

$$Q_{5:10} = Q_{5:9} + D_{10} = 25.228 + 2.450 = 27.678$$

$$Q_{5:11} = Q_{5:10} + D_{11} = 27.678 + 778 = 28.456$$

$$Q_{5:12} = Q_{5:11} + D_{12} = 28.456 + 6.505 = 34.961$$

$$Q_{6:6} = D_6 = 806$$

$$Q_{6:7} = Q_{6:6} + D_7 = 806 + 4.421 = 5.227$$

$$Q_{6:8} = Q_{6:7} + D_8 = 5.227 + 8.239 = 13.466$$

$$Q_{6:9} = Q_{6:8} + D_9 = 13.466 + 5.470 = 18.936$$

$$Q_{6:10} = Q_{6:9} + D_{10} = 18.936 + 2.450 = 21.386$$

$$Q_{6:11} = Q_{6:10} + D_{11} = 21.386 + 778 = 22.164$$

$$Q_{6:12} = Q_{6:11} + D_{12} = 22.164 + 6.505 = 28.669$$

$$Q_{7:7} = D_7 = 4.421$$

$$Q_{7:8} = Q_{7:7} + D_8 = 4.421 + 8.239 = 12.660$$

$$Q_{7:9} = Q_{7:8} + D_9 = 12.660 + 5.470 = 18.130$$

$$Q_{7:10} = Q_{7:9} + D_{10} = 18.130 + 2.450 = 20.580$$

$$Q_{7:11} = Q_{7:10} + D_{11} = 20.580 + 778 = 21.358$$

$$Q_{7:12} = Q_{7:11} + D_{12} = 21.358 + 6.505 = 27.863$$

$$Q_{8:8} = D_8 = 8.239$$

$$Q_{8:9} = Q_{8:8} + D_9 = 8.239 + 5.470 = 13.709$$

$$Q_{8:10} = Q_{8:9} + D_{10} = 13.709 + 2.450 = 16.159$$

$$Q_{8:11} = Q_{8:10} + D_{11} = 16.159 + 778 = 16.937$$

$$Q_{8:12} = Q_{8:11} + D_{12} = 16.937 + 6.505 = 23.442$$

$$Q_{9:9} = D_9 = 5.470$$

$$Q_{9:10} = Q_{9:9} + D_{10} = 5.470 + 2.450 = 7.920$$

$$Q_{9:11} = Q_{9:10} + D_{11} = 7.920 + 778 = 8.698$$

$$Q_{9:12} = Q_{9:11} + D_{12} = 8.698 + 6.505 = 15.203$$

$$Q_{10:10} = D_{10} = 2.450$$

$$Q_{10:11} = Q_{10:10} + D_{11} = 2.450 + 778 = 3.228$$

$$Q_{10:12} = Q_{10:11} + D_{12} = 3.228 + 6.505 = 9.733$$

$$Q_{11:11} = D_{11} = 778$$

$$Q_{11:12} = Q_{11:11} + D_{12} = 778 + 6.505 = 7.283$$

$$Q_{12:12} = D_{12} = 6.505$$

- Perhitungan *cummulative demand* Cengkeh:

$$Q_{1:1} = D_1 = 2.123$$

$$Q_{1:2} = Q_{1:1} + D_2 = 2.123 + 3.072 = 5.195$$

$$Q_{1:3} = Q_{1:2} + D_3 = 5.195 + 3.700 = 8.895$$

$$Q_{1:4} = Q_{1:3} + D_4 = 8.895 + 5.515 = 14.410$$

$$Q_{1:5} = Q_{1:4} + D_5 = 14.410 + 3.775 = 18.185$$

$$Q_{1:6} = Q_{1:5} + D_6 = 18.185 + 483 = 18.668$$

$$Q_{1:7} = Q_{1:6} + D_7 = 18.668 + 2.653 = 21.321$$

$$Q_{1:8} = Q_{1:7} + D_8 = 21.321 + 4.944 = 26.265$$

$$Q_{1:9} = Q_{1:8} + D_9 = 26.265 + 3.282 = 29.547$$

$$Q_{1:10} = Q_{1:9} + D_{10} = 29.547 + 1.470 = 31.017$$

$$Q_{1:11} = Q_{1:10} + D_{11} = 31.017 + 467 = 31.484$$

$$Q_{1:12} = Q_{1:11} + D_{12} = 31.484 + 3.903 = 35.387$$

$$Q_{2:2} = D_2 = 3.072$$

$$Q_{2:3} = Q_{2:2} + D_3 = 3.072 + 3.700 = 6.772$$

$$Q_{2:4} = Q_{2:3} + D_4 = 6.772 + 5.515 = 12.287$$

$$Q_{2:5} = Q_{2:4} + D_5 = 12.287 + 3.775 = 16.062$$

$$Q_{2:6} = Q_{2:5} + D_6 = 16.062 + 483 = 16.545$$

$$Q_{2:7} = Q_{2:6} + D_7 = 16.545 + 2.653 = 19.198$$

$$Q_{2:8} = Q_{2:7} + D_8 = 19.198 + 4.944 = 24.142$$

$$Q_{2:9} = Q_{2:8} + D_9 = 24.142 + 3.282 = 27.424$$

$$Q_{2:10} = Q_{2:9} + D_{10} = 27.424 + 1.470 = 28.894$$

$$Q_{2:11} = Q_{2:10} + D_{11} = 28.894 + 467 = 29.361$$

$$Q_{2:12} = Q_{2:11} + D_{12} = 29.361 + 3.903 = 33.264$$

$$Q_{3:3} = D_3 = 3.700$$

$$Q_{3:4} = Q_{3:3} + D_4 = 3.700 + 5.515 = 9.215$$

$$Q_{3:5} = Q_{3:4} + D_5 = 9.215 + 3.775 = 12.990$$

$$Q_{3:6} = Q_{3:5} + D_6 = 12.990 + 483 = 13.473$$

$$Q_{3:7} = Q_{3:6} + D_7 = 13.473 + 2.653 = 16.126$$

$$Q_{3:8} = Q_{3:7} + D_8 = 16.126 + 4.944 = 21.070$$

$$Q_{3:9} = Q_{3:8} + D_9 = 21.070 + 3.282 = 24.352$$

$$Q_{3:10} = Q_{3:9} + D_{10} = 24.352 + 1.470 = 25.822$$

$$Q_{3:11} = Q_{3:10} + D_{11} = 25.822 + 467 = 26.289$$

$$Q_{3:12} = Q_{3:11} + D_{12} = 26.289 + 3.903 = 30.192$$

$$Q_{4:4} = D_4 = 5.515$$

$$Q_{4:5} = Q_{4:4} + D_5 = 5.515 + 3.775 = 9.290$$

$$Q_{4:6} = Q_{4:5} + D_6 = 9.290 + 483 = 9.773$$

$$Q_{4:7} = Q_{4:6} + D_7 = 9.773 + 2.653 = 12.426$$

$$Q_{4:8} = Q_{4:7} + D_8 = 12.426 + 4.944 = 17.370$$

$$Q_{4:9} = Q_{4:8} + D_9 = 17.370 + 3.282 = 20.652$$

$$Q_{4:10} = Q_{4:9} + D_{10} = 20.652 + 1.470 = 22.122$$

$$Q_{4:11} = Q_{4:10} + D_{11} = 22.122 + 467 = 22.589$$

$$Q_{4:12} = Q_{4:11} + D_{12} = 22.589 + 3.903 = 26.492$$

$$Q_{5:5} = D_5 = 3.775$$

$$Q_{5:6} = Q_{5:5} + D_6 = 3.775 + 483 = 4.258$$

$$Q_{5:7} = Q_{5:6} + D_7 = 4.258 + 2.653 = 6.911$$

$$Q_{5:8} = Q_{5:7} + D_8 = 6.911 + 4.944 = 11.855$$

$$Q_{5:9} = Q_{5:8} + D_9 = 11.855 + 3.282 = 15.137$$

$$Q_{5:10} = Q_{5:9} + D_{10} = 15.137 + 1.470 = 16.607$$

$$Q_{5:11} = Q_{5:10} + D_{11} = 16.607 + 467 = 17.074$$

$$Q_{5:12} = Q_{5:11} + D_{12} = 17.074 + 3.903 = 20.977$$

$$Q_{6:6} = D_6 = 483$$

$$Q_{6:7} = Q_{6:6} + D_7 = 438 + 2.653 = 3.136$$

$$Q_{6:8} = Q_{6:7} + D_8 = 3.136 + 4.944 = 8.080$$

$$Q_{6:9} = Q_{6:8} + D_9 = 8.080 + 3.282 = 11.362$$

$$Q_{6:10} = Q_{6:9} + D_{10} = 11.362 + 1.470 = 12.832$$

$$Q_{6:11} = Q_{6:10} + D_{11} = 12.832 + 467 = 13.299$$

$$Q_{6:12} = Q_{6:11} + D_{12} = 13.299 + 3.903 = 17.202$$

$$Q_{7:7} = D_7 = 2.653$$

$$Q_{7:8} = Q_{7:7} + D_8 = 2.653 + 4.944 = 7.597$$

$$Q_{7:9} = Q_{7:8} + D_9 = 7.597 + 3.282 = 10.879$$

$$Q_{7:10} = Q_{7:9} + D_{10} = 10.879 + 1.470 = 12.349$$

$$Q_{7:11} = Q_{7:10} + D_{11} = 12.349 + 467 = 12.816$$

$$Q_{7:12} = Q_{7:11} + D_{12} = 12.816 + 3.903 = 16.719$$

$$Q_{8:8} = D_8 = 4.944$$

$$Q_{8:9} = Q_{8:8} + D_9 = 4.944 + 3.282 = 8.226$$

$$Q_{8:10} = Q_{8:9} + D_{10} = 8.226 + 1.470 = 9.696$$

$$Q_{8:11} = Q_{8:10} + D_{11} = 9.696 + 467 = 10.163$$

$$Q_{8:12} = Q_{8:11} + D_{12} = 10.163 + 3.903 = 14.066$$

$$Q_{9:9} = D_9 = 3.282$$

$$Q_{9:10} = Q_{9:9} + D_{10} = 3.282 + 1.470 = 4.752$$

$$Q_{9:11} = Q_{9:10} + D_{11} = 4.752 + 467 = 5.219$$

$$Q_{9:12} = Q_{9:11} + D_{12} = 5.219 + 3.903 = 9.122$$

$$Q_{10:10} = D_{10} = 1.470$$

$$Q_{10:11} = Q_{10:10} + D_{11} = 1.470 + 467 = 1.937$$

$$Q_{10:12} = Q_{10:11} + D_{12} = 1.937 + 3.903 = 5.840$$

$$Q_{11:11} = D_{11} = 467$$

$$Q_{11:12} = Q_{11:11} + D_{12} = 467 + 3.903 = 4.370$$

$$Q_{12:12} = D_{12} = 3.903$$

- Perhitungan *cummulative demand* Saos:

$$Q_{1:1} = D_1 = 92$$

$$Q_{1:2} = Q_{1:1} + D_2 = 92 + 133 = 225$$

$$Q_{1:3} = Q_{1:2} + D_3 = 225 + 160 = 385$$

$$Q_{1:4} = Q_{1:3} + D_4 = 385 + 239 = 624$$

$$Q_{1:5} = Q_{1:4} + D_5 = 624 + 164 = 788$$

$$Q_{1:6} = Q_{1:5} + D_6 = 788 + 21 = 809$$

$$Q_{1:7} = Q_{1:6} + D_7 = 809 + 115 = 924$$

$$Q_{1:8} = Q_{1:7} + D_8 = 924 + 214 = 1.138$$

$$Q_{1:9} = Q_{1:8} + D_9 = 1.138 + 142 = 1.280$$

$$Q_{1:10} = Q_{1:9} + D_{10} = 1.280 + 64 = 1.344$$

$$Q_{1:11} = Q_{1:10} + D_{11} = 1.344 + 20 = 1.364$$

$$Q_{1:12} = Q_{1:11} + D_{12} = 1.364 + 169 = 1.533$$

$$Q_{2:2} = D_2 = 133$$

$$Q_{2:3} = Q_{2:2} + D_3 = 133 + 160 = 293$$

$$Q_{2:4} = Q_{2:3} + D_4 = 293 + 239 = 532$$

$$Q_{2:5} = Q_{2:4} + D_5 = 532 + 164 = 696$$

$$Q_{2:6} = Q_{2:5} + D_6 = 696 + 21 = 717$$

$$Q_{2:7} = Q_{2:6} + D_7 = 717 + 115 = 832$$

$$Q_{2:8} = Q_{2:7} + D_8 = 832 + 214 = 1.046$$

$$Q_{2:9} = Q_{2:8} + D_9 = 1.046 + 142 = 1.188$$

$$Q_{2:10} = Q_{2:9} + D_{10} = 1.188 + 64 = 1.252$$

$$Q_{2:11} = Q_{2:10} + D_{11} = 1.252 + 20 = 1.272$$

$$Q_{2:12} = Q_{2:11} + D_{12} = 1.272 + 169 = 1.441$$

$$Q_{3:3} = D_3 = 160$$

$$Q_{3:4} = Q_{3:3} + D_4 = 160 + 239 = 399$$

$$Q_{3:5} = Q_{3:4} + D_5 = 399 + 164 = 563$$

$$Q_{3:6} = Q_{3:5} + D_6 = 563 + 21 = 584$$

$$Q_{3:7} = Q_{3:6} + D_7 = 584 + 115 = 699$$

$$Q_{3:8} = Q_{3:7} + D_8 = 699 + 214 = 913$$

$$Q_{3:9} = Q_{3:8} + D_9 = 913 + 142 = 1.055$$

$$Q_{3:10} = Q_{3:9} + D_{10} = 1.055 + 64 = 1.119$$

$$Q_{3:11} = Q_{3:10} + D_{11} = 1.119 + 20 = 1.139$$

$$Q_{3:12} = Q_{3:11} + D_{12} = 1.139 + 169 = 1.308$$

$$Q_{4:4} = D_4 = 239$$

$$Q_{4:5} = Q_{4:4} + D_5 = 239 + 164 = 403$$

$$Q_{4:6} = Q_{4:5} + D_6 = 403 + 21 = 424$$

$$Q_{4:7} = Q_{4:6} + D_7 = 424 + 115 = 539$$

$$Q_{4:8} = Q_{4:7} + D_8 = 539 + 214 = 753$$

$$Q_{4:9} = Q_{4:8} + D_9 = 753 + 142 = 895$$

$$Q_{4:10} = Q_{4:9} + D_{10} = 895 + 64 = 959$$

$$Q_{4:11} = Q_{4:10} + D_{11} = 959 + 20 = 979$$

$$Q_{4:12} = Q_{4:11} + D_{12} = 979 + 169 = 1.148$$

$$Q_{5:5} = D_5 = 164$$

$$Q_{5:6} = Q_{5:5} + D_6 = 164 + 21 = 185$$

$$Q_{5:7} = Q_{5:6} + D_7 = 185 + 115 = 300$$

$$Q_{5:8} = Q_{5:7} + D_8 = 300 + 214 = 514$$

$$Q_{5:9} = Q_{5:8} + D_9 = 514 + 142 = 656$$

$$Q_{5:10} = Q_{5:9} + D_{10} = 656 + 64 = 720$$

$$Q_{5:11} = Q_{5:10} + D_{11} = 720 + 20 = 740$$

$$Q_{5:12} = Q_{5:11} + D_{12} = 740 + 169 = 909$$

$$Q_{6:6} = D_6 = 21$$

$$Q_{6:7} = Q_{6:6} + D_7 = 21 + 115 = 136$$

$$Q_{6:8} = Q_{6:7} + D_8 = 136 + 214 = 350$$

$$Q_{6:9} = Q_{6:8} + D_9 = 350 + 142 = 492$$

$$Q_{6:10} = Q_{6:9} + D_{10} = 492 + 64 = 556$$

$$Q_{6:11} = Q_{6:10} + D_{11} = 556 + 20 = 576$$

$$Q_{6:12} = Q_{6:11} + D_{12} = 576 + 169 = 745$$

$$Q_{7:7} = D_7 = 115$$

$$Q_{7:8} = Q_{7:7} + D_8 = 115 + 214 = 329$$

$$Q_{7:9} = Q_{7:8} + D_9 = 329 + 142 = 471$$

$$Q_{7:10} = Q_{7:9} + D_{10} = 471 + 64 = 535$$

$$Q_{7:11} = Q_{7:10} + D_{11} = 535 + 20 = 555$$

$$Q_{7:12} = Q_{7:11} + D_{12} = 555 + 169 = 724$$

$$Q_{8:8} = D_8 = 214$$

$$Q_{8:9} = Q_{8:8} + D_9 = 214 + 142 = 356$$

$$Q_{8:10} = Q_{8:9} + D_{10} = 356 + 64 = 420$$

$$Q_{8:11} = Q_{8:10} + D_{11} = 420 + 20 = 440$$

$$Q_{8:12} = Q_{8:11} + D_{12} = 440 + 169 = 609$$

$$Q_{9:9} = D_9 = 142$$

$$Q_{9:10} = Q_{9:9} + D_{10} = 142 + 64 = 206$$

$$Q_{9:11} = Q_{9:10} + D_{11} = 206 + 20 = 226$$

$$Q_{9:12} = Q_{9:11} + D_{12} = 226 + 169 = 395$$

$$Q_{10:10} = D_{10} = 64$$

$$Q_{10:11} = Q_{10:10} + D_{11} = 64 + 20 = 84$$

$$Q_{10:12} = Q_{10:11} + D_{12} = 84 + 169 = 253$$

$$Q_{11:11} = D_{11} = 20$$

$$Q_{11:12} = Q_{11:11} + D_{12} = 20 + 169 = 189$$

$$Q_{12:12} = D_{12} = 169$$

LAMPIRAN 3

- Perhitungan *variable cost* (Z_{cc}) Tembakau :

$$\begin{aligned}Z_{1:1} &= C + hP [(Q_{1:1} - Q_{1:1})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(3.538 - 3.538)] \\ &= \text{Rp. } 625.000\end{aligned}$$

$$\begin{aligned}Z_{1:2} &= C + hP [(Q_{1:2} - Q_{1:1}) + (Q_{1:2} - Q_{1:2})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(8.658 - 3.538) + (8.658 - 8.658)] \\ &= \text{Rp. } 4.465.000\end{aligned}$$

$$\begin{aligned}Z_{1:3} &= C + hP [(Q_{1:3} - Q_{1:1}) + (Q_{1:3} - Q_{1:2}) + (Q_{1:3} - Q_{1:3})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(14.825 - 3.538) + (14.825 - 8.658) + \\ &\quad (14.825 - 14.825)] \\ &= \text{Rp. } 13.715.500\end{aligned}$$

$$\begin{aligned}Z_{1:4} &= C + hP [(Q_{1:4} - Q_{1:1}) + (Q_{1:4} - Q_{1:2}) + (Q_{1:4} - Q_{1:3}) + (Q_{1:4} - Q_{1:4})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(24.017 - 3.538) + (24.017 - 8.658) + \\ &\quad (24.017 - 14.825) + (24.017 - 24.017)] \\ &= \text{Rp. } 34.397.500\end{aligned}$$

$$\begin{aligned}Z_{1:5} &= C + hP [(Q_{1:5} - Q_{1:1}) + (Q_{1:5} - Q_{1:2}) + (Q_{1:5} - Q_{1:3}) + (Q_{1:5} - Q_{1:4}) \\ &\quad (Q_{1:5} - Q_{1:5})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(30.309 - 3.538) + (30.309 - 8.658) + \\ &\quad (30.309 - 14.825) + (30.309 - 24.017) + (30.309 - 30.309)] \\ &= \text{Rp. } 53.273.500\end{aligned}$$

$$\begin{aligned}Z_{1:6} &= C + hP [(Q_{1:6} - Q_{1:1}) + (Q_{1:6} - Q_{1:2}) + (Q_{1:6} - Q_{1:3}) + (Q_{1:6} - Q_{1:4}) \\ &\quad + (Q_{1:6} - Q_{1:5}) + (Q_{1:6} - Q_{1:6})] \\ &= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(31.115 - 3.538) + (31.115 - 8.658) +\end{aligned}$$

$$(31.115 - 14.825) + (31.115 - 24.017) + (31.115 - 30.309) + (31.115 - 31.115)]$$

$$= \text{Rp.}56.296.000$$

$$\begin{aligned} Z_{1:7} &= C + hP [(Q_{1:7} - Q_{1:1}) + (Q_{1:7} - Q_{1:2}) + (Q_{1:7} - Q_{1:3}) + (Q_{1:7} - Q_{1:4}) \\ &\quad + (Q_{1:7} - Q_{1:5}) + (Q_{1:7} - Q_{1:6}) + (Q_{1:7} - Q_{1:7})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.}50.000)[(35.536 - 3.538) + (35.536 - 8.658) + \\ &\quad (35.536 - 14.825) + (35.536 - 24.017) + (35.536 - 30.309) + (35.536 - 31.115) \\ &\quad + (35.536 - 35.536)] \end{aligned}$$

$$= \text{Rp.}76.190.500$$

$$\begin{aligned} Z_{1:8} &= C + hP [(Q_{1:8} - Q_{1:1}) + (Q_{1:8} - Q_{1:2}) + (Q_{1:8} - Q_{1:3}) + (Q_{1:8} - Q_{1:4}) \\ &\quad + (Q_{1:8} - Q_{1:5}) + (Q_{1:8} - Q_{1:6}) + (Q_{1:8} - Q_{1:7}) + (Q_{1:8} - Q_{1:8})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.}50.000)[(43.775 - 3.538) + (43.775 - 8.658) + \\ &\quad (43.775 - 14.825) + (43.775 - 24.017) + (43.775 - 30.309) + (43.775 - 31.115) \\ &\quad + (43.775 - 35.536) + (43.775 - 43.775)] \end{aligned}$$

$$= \text{Rp.}119.445.250$$

$$\begin{aligned} Z_{1:9} &= C + hP [(Q_{1:9} - Q_{1:1}) + (Q_{1:9} - Q_{1:2}) + (Q_{1:9} - Q_{1:3}) + (Q_{1:9} - Q_{1:4}) \\ &\quad + (Q_{1:9} - Q_{1:5}) + (Q_{1:9} - Q_{1:6}) + (Q_{1:9} - Q_{1:7}) + (Q_{1:9} - Q_{1:8}) + (Q_{1:9} - \\ &\quad Q_{1:9})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.}50.000)[(49.245 - 3.538) + (49.245 - 8.658) + \\ &\quad (49.245 - 14.825) + (49.245 - 24.017) + (49.245 - 30.309) + (49.245 - 31.115) \\ &\quad + (49.245 - 35.536) + (49.245 - 43.775) + (49.245 - 49.245)] \end{aligned}$$

$$= \text{Rp.}152.265.250$$

$$Z_{1:10} = C + hP [(Q_{1:10} - Q_{1:1}) + (Q_{1:10} - Q_{1:2}) + (Q_{1:10} - Q_{1:3}) + (Q_{1:10} - Q_{1:4})$$

$$\begin{aligned}
& + (Q_{1:10} - Q_{1:5}) + (Q_{1:10} - Q_{1:6}) + (Q_{1:10} - Q_{1:7}) + (Q_{1:10} - Q_{1:8}) + \\
& (Q_{1:10} - Q_{1:9}) + (Q_{1:10} - Q_{1:10})] \\
= & \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(51.695 - 3.538) + (51.695 - 8.658) + \\
& (51.695 - 14.825) + (51.695 - 24.017) + (51.695 - 30.309) + (51.695 - 31.115) \\
& + (51.695 - 35.536) + (51.695 - 43.775) + (51.695 - 49.245) + (51.695 - \\
& 51.695)] \\
= & \text{Rp. } 168.802.750
\end{aligned}$$

$$\begin{aligned}
Z_{1:11} = & C + hP [(Q_{1:11} - Q_{1:1}) + (Q_{1:11} - Q_{1:2}) + (Q_{1:11} - Q_{1:3}) + (Q_{1:11} - Q_{1:4}) \\
& + (Q_{1:11} - Q_{1:5}) + (Q_{1:11} - Q_{1:6}) + (Q_{1:11} - Q_{1:7}) + (Q_{1:11} - Q_{1:8}) + \\
& (Q_{1:11} - Q_{1:9}) + (Q_{1:11} - Q_{1:10}) + (Q_{1:11} - Q_{1:11})] \\
= & \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(52.473 - 3.538) + (52.473 - 8.658) + \\
& (52.473 - 14.825) + (52.473 - 24.017) + (52.473 - 30.309) + (52.473 - 31.115) \\
& + (52.473 - 35.536) + (52.473 - 43.775) + (52.473 - 49.245) + (52.473 - \\
& 51.695) + (52.473 - 52.473)] \\
= & \text{Rp. } 174.637.750
\end{aligned}$$

$$\begin{aligned}
Z_{1:12} = & C + hP [(Q_{1:12} - Q_{1:1}) + (Q_{1:12} - Q_{1:2}) + (Q_{1:12} - Q_{1:3}) + (Q_{1:12} - Q_{1:4}) \\
& + (Q_{1:12} - Q_{1:5}) + (Q_{1:12} - Q_{1:6}) + (Q_{1:12} - Q_{1:7}) + (Q_{1:12} - Q_{1:8}) + \\
& (Q_{1:12} - Q_{1:9}) + (Q_{1:12} - Q_{1:10}) + (Q_{1:12} - Q_{1:11}) + (Q_{1:12} - Q_{1:12})] \\
= & \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000)[(58.978 - 3.538) + (58.978 - 8.658) + \\
& (58.978 - 14.825) + (58.978 - 24.017) + (58.978 - 30.309) + (58.978 - 31.115) \\
& + (58.978 - 35.536) + (58.978 - 43.775) + (58.978 - 49.245) + (58.978 - \\
& 51.695) + (58.978 - 52.473) + (58.978 - 58.978)] \\
= & \text{Rp. } 228.304.000
\end{aligned}$$

$$\begin{aligned}
Z_{2:2} &= C + hP [(Q_{2:2} - Q_{2:2})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(5.120 - 5.120)] \\
&= \text{Rp. } 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{2:3} &= C + hP [(Q_{2:3} - Q_{2:2}) + (Q_{2:3} - Q_{2:3})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(11.287 - 5.120) + (11.287 - 11.287)] \\
&= \text{Rp. } 5.250.250
\end{aligned}$$

$$\begin{aligned}
Z_{2:4} &= C + hP [(Q_{2:4} - Q_{2:2}) + (Q_{2:4} - Q_{2:3}) + (Q_{2:4} - Q_{2:4})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(20.479 - 5.120) + (20.479 - 11.287) \\
&\quad + (20.479 - 20.479)] \\
&= \text{Rp. } 19.038.250
\end{aligned}$$

$$\begin{aligned}
Z_{2:5} &= C + hP [(Q_{2:5} - Q_{2:2}) + (Q_{2:5} - Q_{2:3}) + (Q_{2:5} - Q_{2:4}) + (Q_{2:5} - Q_{2:5})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(26.771 - 5.120) + (26.771 - 11.287) \\
&\quad + (26.771 - 20.479) + (26.771 - 26.771)] \\
&= \text{Rp. } 33.195.250
\end{aligned}$$

$$\begin{aligned}
Z_{2:6} &= C + hP [(Q_{2:6} - Q_{2:2}) + (Q_{2:6} - Q_{2:3}) + (Q_{2:6} - Q_{2:4}) + (Q_{2:6} - Q_{2:5}) \\
&\quad + (Q_{2:6} - Q_{2:6})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(27.577 - 5.120) + (27.577 - 11.287) \\
&\quad + (27.577 - 20.479) + (27.577 - 26.771) + (27.577 - 27.577)] \\
&= \text{Rp. } 35.613.250
\end{aligned}$$

$$\begin{aligned}
Z_{2:7} &= C + hP [(Q_{2:7} - Q_{2:2}) + (Q_{2:7} - Q_{2:3}) + (Q_{2:7} - Q_{2:4}) + (Q_{2:7} - Q_{2:5}) \\
&\quad + (Q_{2:7} - Q_{2:6}) + (Q_{2:7} - Q_{2:7})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(31.998 - 5.120) + (31.998 - 11.287) \\
&\quad + (31.998 - 20.479) + (31.998 - 26.771) + (31.998 - 27.577) + (31.998 - \\
&\quad 31.998)]
\end{aligned}$$

$$= \text{Rp.}52.192.000$$

$$\begin{aligned} Z_{2:8} &= C + hP [(Q_{2:8} - Q_{2:2}) + (Q_{2:8} - Q_{2:3}) + (Q_{2:8} - Q_{2:4}) + (Q_{2:8} - Q_{2:5}) + \\ &\quad (Q_{2:8} - Q_{2:6}) + (Q_{2:8} - Q_{2:7}) + (Q_{2:8} - Q_{2:8})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.} 50.000)[(40.237 - 5.120) + (40.237 - 11.287) \\ &\quad + (40.237 - 20.479) + (40.237 - 26.771) + (40.237 - 27.577) + (40.237 - \\ &\quad 31.998) + (40.237 - 40.237)] \\ &= \text{Rp.}89.267.500 \end{aligned}$$

$$\begin{aligned} Z_{2:9} &= C + hP [(Q_{2:9} - Q_{2:2}) + (Q_{2:9} - Q_{2:3}) + (Q_{2:9} - Q_{2:4}) + (Q_{2:9} - Q_{2:5}) + \\ &\quad (Q_{2:9} - Q_{2:6}) + (Q_{2:9} - Q_{2:7}) + (Q_{2:9} - Q_{2:8}) + (Q_{2:9} - Q_{2:9})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.} 50.000)[(45.707 - 5.120) + (45.707 - 11.287) \\ &\quad + (45.707 - 20.479) + (45.707 - 26.771) + (45.707 - 27.577) + (45.707 - \\ &\quad 31.998) + (45.707 - 40.237) + (45.707 - 45.707)] \\ &= \text{Rp.}117.985.000 \end{aligned}$$

$$\begin{aligned} Z_{2:10} &= C + hP [(Q_{2:10} - Q_{2:2}) + (Q_{2:10} - Q_{2:3}) + (Q_{2:10} - Q_{2:4}) + (Q_{2:10} - \\ &\quad Q_{2:5}) + (Q_{2:10} - Q_{2:6}) + (Q_{2:10} - Q_{2:7}) + (Q_{2:10} - Q_{2:8}) + (Q_{2:10} - \\ &\quad Q_{2:9}) + (Q_{2:10} - Q_{2:10})] \\ &= \text{Rp.} 625.000 + (0.015 \times \text{Rp.} 50.000)[(48.157 - 5.120) + (48.157 - 11.287) \\ &\quad + (48.157 - 20.479) + (48.157 - 26.771) + (48.157 - 27.577) + (48.157 - \\ &\quad 31.998) + (48.157 - 40.237) + (48.157 - 45.707) + (48.157 - 48.157)] \\ &= \text{Rp.}132.685.000 \end{aligned}$$

$$\begin{aligned} Z_{2:11} &= C + hP [(Q_{2:11} - Q_{2:2}) + (Q_{2:11} - Q_{2:3}) + (Q_{2:11} - Q_{2:4}) + (Q_{2:11} - \\ &\quad Q_{2:5}) + (Q_{2:11} - Q_{2:6}) + (Q_{2:11} - Q_{2:7}) + (Q_{2:11} - Q_{2:8}) + (Q_{2:11} - \\ &\quad Q_{2:9}) + (Q_{2:11} - Q_{2:10}) + (Q_{2:11} - Q_{2:11})] \end{aligned}$$

$$\begin{aligned}
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(48.935 - 5.120) + (48.935 - 11.287) \\
&+ (48.935 - 20.479) + (48.935 - 26.771) + (48.935 - 27.577) + (48.935 - \\
&31.998) + (48.935 - 40.237) + (48.935 - 45.707) + (48.935 - 48.157) + (48.935 \\
&- 48.935)] \\
&= \text{Rp. } 137.936.500
\end{aligned}$$

$$\begin{aligned}
Z_{2:12} &= C + hP [(Q_{2:12} - Q_{2:2}) + (Q_{2:12} - Q_{2:3}) + (Q_{2:12} - Q_{2:4}) + (Q_{2:12} - \\
&Q_{2:5}) + (Q_{2:12} - Q_{2:6}) + (Q_{2:12} - Q_{2:7}) + (Q_{2:12} - Q_{2:8}) + (Q_{2:12} - \\
&Q_{2:9}) + (Q_{2:12} - Q_{2:10}) + (Q_{2:12} - Q_{2:11}) + (Q_{2:12} - Q_{2:12})] \\
&= \text{Rp. } 625.000 + (0.015 \times \text{Rp. } 50.000)[(55.440 - 5.120) + (55.440 - 11.287) \\
&+ (55.440 - 20.479) + (55.440 - 26.771) + (55.440 - 27.577) + (55.440 - \\
&31.998) + (55.440 - 40.237) + (55.440 - 45.707) + (55.440 - 48.157) + (55.440 \\
&- 48.935) + (55.440 - 55.440)] \\
&= \text{Rp. } 186.724.000
\end{aligned}$$

$$\begin{aligned}
Z_{3:3} &= C + hP [(Q_{3:3} - Q_{3:3})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(6.167 - 6.167)] \\
&= \text{Rp. } 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{3:4} &= C + hP [(Q_{3:4} - Q_{3:3}) + (Q_{3:4} - Q_{3:4})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(15.359 - 6.167) + (15.359 - 15.359)] \\
&= \text{Rp. } 7.519.000
\end{aligned}$$

$$\begin{aligned}
Z_{3:5} &= C + hP [(Q_{3:5} - Q_{3:3}) + (Q_{3:5} - Q_{3:4}) + (Q_{3:5} - Q_{3:5})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(21.651 - 6.167) + (21.651 - 15.359) + \\
&(21.651 - 21.651)] \\
&= \text{Rp. } 16.957.000
\end{aligned}$$

$$\begin{aligned}
Z_{3:6} &= C + hP [(Q_{3:6} - Q_{3:3}) + (Q_{3:6} - Q_{3:4}) + (Q_{3:6} - Q_{3:5}) + (Q_{3:6} - Q_{3:6})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(22.457 - 6.167) + (22.457 - 15.359) + \\
&\quad (22.457 - 21.651) + (22.457 - 22.457)] \\
&= \text{Rp.}18.770.500
\end{aligned}$$

$$\begin{aligned}
Z_{3:7} &= C + hP [(Q_{3:7} - Q_{3:3}) + (Q_{3:7} - Q_{3:4}) + (Q_{3:7} - Q_{3:5}) + (Q_{3:7} - Q_{3:6}) + \\
&\quad (Q_{3:7} - Q_{3:7})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(26.878 - 6.167) + (26.878 - 15.359) + \\
&\quad (26.878 - 21.651) + (26.878 - 22.457) + (26.878 - 26.878)] \\
&= \text{Rp.}32.033.500
\end{aligned}$$

$$\begin{aligned}
Z_{3:8} &= C + hP [(Q_{3:8} - Q_{3:3}) + (Q_{3:8} - Q_{3:4}) + (Q_{3:8} - Q_{3:5}) + (Q_{3:8} - Q_{3:6}) + \\
&\quad (Q_{3:8} - Q_{3:7}) + (Q_{3:8} - Q_{3:8})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(35.117 - 6.167) + (35.117 - 15.359) + \\
&\quad (35.117 - 21.651) + (35.117 - 22.457) + (35.117 - 26.878) + (35.117 - \\
&\quad 35.117)] \\
&= \text{Rp.}62.929.750
\end{aligned}$$

$$\begin{aligned}
Z_{3:9} &= C + hP [(Q_{3:9} - Q_{3:3}) + (Q_{3:9} - Q_{3:4}) + (Q_{3:9} - Q_{3:5}) + (Q_{3:9} - Q_{3:6}) + \\
&\quad (Q_{3:9} - Q_{3:7}) + (Q_{3:9} - Q_{3:8}) + (Q_{3:9} - Q_{3:9})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(40.587 - 6.167) + (40.587 - 15.359) + \\
&\quad (40.587 - 21.651) + (40.587 - 22.457) + (40.587 - 26.878) + (40.587 - 35.117) \\
&\quad + (40.587 - 40.587)] \\
&= \text{Rp.}87.544.750
\end{aligned}$$

$$\begin{aligned}
Z_{3:10} &= C + hP [(Q_{3:10} - Q_{3:3}) + (Q_{3:10} - Q_{3:4}) + (Q_{3:10} - Q_{3:5}) + (Q_{3:10} - Q_{3:6}) + \\
&\quad (Q_{3:10} - Q_{3:7}) + (Q_{3:10} - Q_{3:8}) + (Q_{3:10} - Q_{3:9}) + (Q_{3:10} - Q_{3:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(43.037 - 6.167) + (43.037 - 15.359) +
\end{aligned}$$

$$\begin{aligned}
& (43.037 - 21.651) + (43.037 - 22.457) + (43.037 - 26.878) + (43.037 - 35.117) \\
& + (43.037 - 40.587) + (43.037 - 43.037)] \\
& = \text{Rp.}100.407.250
\end{aligned}$$

$$\begin{aligned}
Z_{3:11} &= C + hP [(Q_{3:11} - Q_{3:3}) + (Q_{3:11} - Q_{3:4}) + (Q_{3:11} - Q_{3:5}) + (Q_{3:11} - Q_{3:6}) + \\
& (Q_{3:11} - Q_{3:7}) + (Q_{3:11} - Q_{3:8}) + (Q_{3:11} - Q_{3:9}) + (Q_{3:11} - Q_{3:10}) + (Q_{3:11} - \\
& Q_{3:11})] \\
& = \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(43.815 - 6.167) + (43.815 - 15.359) + \\
& (43.815 - 21.651) + (43.815 - 22.457) + (43.815 - 26.878) + (43.815 - 35.117) \\
& + (43.815 - 40.587) + (43.815 - 43.037) + (43.815 - 43.815)] \\
& = \text{Rp.}105.075.250
\end{aligned}$$

$$\begin{aligned}
Z_{3:12} &= C + hP [(Q_{3:12} - Q_{3:3}) + (Q_{3:12} - Q_{3:4}) + (Q_{3:12} - Q_{3:5}) + (Q_{3:12} - Q_{3:6}) \\
& + (Q_{3:12} - Q_{3:7}) + (Q_{3:12} - Q_{3:8}) + (Q_{3:12} - Q_{3:9}) + (Q_{3:12} - Q_{3:10}) \\
& + (Q_{3:12} - Q_{3:11}) + (Q_{3:12} - Q_{3:12})] \\
& = \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(50.320 - 6.167) + (50.320 - 15.359) + \\
& (50.320 - 21.651) + (50.320 - 22.457) + (50.320 - 26.878) + (50.320 - 35.117) \\
& + (50.320 - 40.587) + (50.320 - 43.037) + (50.320 - 43.815) + (50.320 - \\
& 50.320)] \\
& = \text{Rp.}148.984.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:4} &= C + hP [(Q_{4:4} - Q_{4:4})] \\
& = \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000)[(9.192 - 9.192)] \\
& = \text{Rp.} 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:5} &= C + hP [(Q_{4:5} - Q_{4:4}) + (Q_{4:5} - Q_{4:5})] \\
& = \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000)[(15.484 - 9.192) + (15.484 - 15.484)] \\
& = \text{Rp.}5.344.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:6} &= C + hP [(Q_{4:6} - Q_{4:4}) + (Q_{4:6} - Q_{4:5}) + (Q_{4:6} - Q_{4:6})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000)[(16.290-9.192) + (16.290-15.484) + \\
&\quad (16.290-16.290)] \\
&= \text{Rp.}6.553.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:7} &= C + hP [(Q_{4:7} - Q_{4:4}) + (Q_{4:7} - Q_{4:5}) + (Q_{4:7} - Q_{4:6}) + (Q_{4:7} - Q_{4:7})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000)[(20.711-9.192) + (20.711-15.484) + \\
&\quad (20.711-16.290) + (20.711-20.711)] \\
&= \text{Rp.}16.500.250
\end{aligned}$$

$$\begin{aligned}
Z_{4:8} &= C + hP [(Q_{4:8} - Q_{4:4}) + (Q_{4:8} - Q_{4:5}) + (Q_{4:8} - Q_{4:6}) + (Q_{4:8} - \\
&\quad Q_{4:7}) + (Q_{4:8} - Q_{4:8})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000)[(28.950-9.192) + (28.950-15.484) + \\
&\quad (28.950-16.290) + (28.950-20.711) + (28.950-28.950)] \\
&= \text{Rp.}41.217.250
\end{aligned}$$

$$\begin{aligned}
Z_{4:9} &= C + hP [(Q_{4:9} - Q_{4:4}) + (Q_{4:9} - Q_{4:5}) + (Q_{4:9} - Q_{4:6}) + (Q_{4:9} - \\
&\quad Q_{4:7}) + (Q_{4:9} - Q_{4:8}) + (Q_{4:9} - Q_{4:9})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000)[(34.420-9.192) + (34.420-15.484) + \\
&\quad (34.420-16.290) + (34.420-20.711) + (34.420-28.950) + (34.420-34.420)] \\
&= \text{Rp.}61.729.750
\end{aligned}$$

$$\begin{aligned}
Z_{4:10} &= C + hP [(Q_{4:10} - Q_{4:4}) + (Q_{4:10} - Q_{4:5}) + (Q_{4:10} - Q_{4:6}) + (Q_{4:10} - \\
&\quad Q_{4:7}) + (Q_{4:10} - Q_{4:8}) + (Q_{4:10} - Q_{4:9}) + (Q_{4:10} - Q_{4:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000)[(36.870-9.192) + (36.870-15.484) + \\
&\quad (36.870-16.290) + (36.870-20.711) + (36.870-28.950) + (36.870-34.420) + \\
&\quad (36.870-36.870)]
\end{aligned}$$

$$= \text{Rp.}72.754.750$$

$$\begin{aligned} Z_{4:11} &= C + hP [(Q_{4:11} - Q_{4:4}) + (Q_{4:11} - Q_{4:5}) + (Q_{4:11} - Q_{4:6}) + (Q_{4:11} - \\ &\quad Q_{4:7}) + (Q_{4:11} - Q_{4:8}) + (Q_{4:11} - Q_{4:9}) + (Q_{4:11} - Q_{4:10}) + (Q_{4:11} - \\ &\quad Q_{4:11})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000)[(37.648-9.192) + (37.648-15.484) + \\ &\quad (37.648-16.290) + (37.648-20.711) + (37.648-28.950) + (37.648-34.420) + \\ &\quad (37.648-36.870) + (37.648-37.648)] \\ &= \text{Rp.}76.839.250 \end{aligned}$$

$$\begin{aligned} Z_{4:12} &= C + hP [(Q_{4:12} - Q_{4:4}) + (Q_{4:12} - Q_{4:5}) + (Q_{4:12} - Q_{4:6}) \\ &\quad + (Q_{4:12} - Q_{4:7}) + (Q_{4:12} - Q_{4:8}) + (Q_{4:12} - Q_{4:9}) \\ &\quad + (Q_{4:12} - Q_{4:10}) + (Q_{4:12} - Q_{4:11}) + (Q_{4:12} - Q_{4:12})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000)[(44.153-9.192) + (44.153-15.484) + \\ &\quad (44.153-16.290) + (44.153-20.711) + (44.153-28.950) + (44.153-34.420) + \\ &\quad (44.153-36.870) + (44.153-37.648) + (44.153-44.153)] \\ &= \text{Rp.}115.869.250 \end{aligned}$$

$$\begin{aligned} Z_{5:5} &= C + hP [(Q_{5:5} - Q_{5:5})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(6.292-6.292)] \\ &= \text{Rp.} 625.000 \end{aligned}$$

$$\begin{aligned} Z_{5:6} &= C + hP [(Q_{5:6} - Q_{5:5}) + (Q_{5:6} - Q_{5:6})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(7.098-6.292) + (7.098-7.098)] \\ &= \text{Rp.}1.229.500 \end{aligned}$$

$$Z_{5:7} = C + hP [(Q_{5:7} - Q_{5:5}) + (Q_{5:7} - Q_{5:6}) + (Q_{5:7} - Q_{5:7})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(11.519-6.292) + (11.519-7.098) + (11.519-11.519)]$$

$$= \text{Rp.}7.861.000$$

$$Z_{5:8} = C + hP [(Q_{5:8} - Q_{5:5}) + (Q_{5:8} - Q_{5:6}) + (Q_{5:8} - Q_{5:7}) + (Q_{5:8} - Q_{5:8})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(19.758-6.292) + (19.758-7.098) + (19.758-11.519) + (19.758-19.758)]$$

$$= \text{Rp.}26.398.750$$

$$Z_{5:9} = C + hP [(Q_{5:9} - Q_{5:5}) + (Q_{5:9} - Q_{5:6}) + (Q_{5:9} - Q_{5:7}) + (Q_{5:9} - Q_{5:8}) + (Q_{5:9} - Q_{5:9})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(25.228-6.292) + (25.228-7.098) + (25.228-11.519) + (25.228-19.758) + (25.228-25.228)]$$

$$= \text{Rp.}42.808.750$$

$$Z_{5:10} = C + hP [(Q_{5:10} - Q_{5:5}) + (Q_{5:10} - Q_{5:6}) + (Q_{5:10} - Q_{5:7}) + (Q_{5:10} - Q_{5:8}) + (Q_{5:10} - Q_{5:9}) + (Q_{5:10} - Q_{5:10})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(27.678-6.292) + (27.678-7.098) + (27.678-11.519) + (27.678-19.758) + (27.678-25.228) + (27.678-27.678)]$$

$$= \text{Rp.}51.996.250$$

$$Z_{5:11} = C + hP [(Q_{5:11} - Q_{5:5}) + (Q_{5:11} - Q_{5:6}) + (Q_{5:11} - Q_{5:7}) + (Q_{5:11} - Q_{5:8}) + (Q_{5:11} - Q_{5:9}) + (Q_{5:11} - Q_{5:10}) + (Q_{5:11} - Q_{5:11})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(28.456-6.292) + (28.456-7.098) + (28.456-11.519) + (28.456-19.758) + (28.456-25.228) + (28.456-27.678) + (28.456-28.456)]$$

$$= \text{Rp.}55.497.250$$

$$\begin{aligned}
Z_{5:12} &= C + hP [(Q_{5:12} - Q_{5:5}) + (Q_{5:12} - Q_{5:6}) + (Q_{5:12} - Q_{5:7}) + (Q_{5:12} - Q_{5:8}) + \\
&\quad (Q_{5:12} - Q_{5:9}) + (Q_{5:12} - Q_{5:10}) + (Q_{5:12} - Q_{5:11}) + (Q_{5:12} - Q_{5:12})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(34.961-6.292) + (34.961-7.098) + \\
&\quad (34.961-11.519) + (34.961-19.758) + (34.961-25.228) + (34.961-27.678) + \\
&\quad (34.961-28.456) + (34.961-34.961)] \\
&= \text{Rp.}89.648.500
\end{aligned}$$

$$\begin{aligned}
Z_{6:6} &= C + hP [(Q_{6:6} - Q_{6:6})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(806-806)] \\
&= \text{Rp. } 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{6:7} &= C + hP [(Q_{6:7} - Q_{6:6}) + (Q_{6:7} - Q_{6:7})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(5.227-806) + (5.227-5.227)] \\
&= \text{Rp.}3.940.750
\end{aligned}$$

$$\begin{aligned}
Z_{6:8} &= C + hP [(Q_{6:8} - Q_{6:6}) + (Q_{6:8} - Q_{6:7}) + (Q_{6:8} - Q_{6:8})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(13.466-806) + (13.466-5.227) + \\
&\quad (13.466-13.466)] \\
&= \text{Rp.}16.299.250
\end{aligned}$$

$$\begin{aligned}
Z_{6:9} &= C + hP [(Q_{6:9} - Q_{6:6}) + (Q_{6:9} - Q_{6:7}) + (Q_{6:9} - Q_{6:8}) + (Q_{6:9} - Q_{6:9})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(18.936-806) + (18.936-5.227) + \\
&\quad (18.936-13.466) + (18.936-18.936)] \\
&= \text{Rp.}28.606.750
\end{aligned}$$

$$\begin{aligned}
Z_{6:10} &= C + hP [(Q_{6:10} - Q_{6:6}) + (Q_{6:10} - Q_{6:7}) + (Q_{6:10} - Q_{6:8}) + (Q_{6:10} - Q_{6:9}) + \\
&\quad (Q_{6:10} - Q_{6:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(21.386-806) + (21.386-5.227) + \\
&\quad (21.386-13.466) + (21.386-18.936) + (21.386-21.386)]
\end{aligned}$$

$$= \text{Rp.}35.956.750$$

$$\begin{aligned} Z_{6:11} &= C + hP [(Q_{6:11} - Q_{6:6}) + (Q_{6:11} - Q_{6:7}) + (Q_{6:11} - Q_{6:8}) + (Q_{6:11} - Q_{6:9}) + \\ &\quad (Q_{6:11} - Q_{6:10}) + (Q_{6:11} - Q_{6:11})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(22.164-806) + (22.164-5.227) + \\ &\quad (22.164-13.466) + (22.164-18.936) + (22.164-21.386) + (22.164-22.164)] \\ &= \text{Rp.}38.874.250 \end{aligned}$$

$$\begin{aligned} Z_{6:12} &= C + hP [(Q_{6:12} - Q_{6:6}) + (Q_{6:12} - Q_{6:7}) + (Q_{6:12} - Q_{6:8}) + (Q_{6:12} - Q_{6:9}) + \\ &\quad (Q_{6:12} - Q_{6:10}) + (Q_{6:12} - Q_{6:11}) + (Q_{6:12} - Q_{6:12})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(28.669-806) + (28.669-5.227) + \\ &\quad (28.669-13.466) + (28.669-18.936) + (28.669-21.386) + (28.669-22.164) + \\ &\quad (28.669-28.669)] \\ &= \text{Rp.}68.146.750 \end{aligned}$$

$$\begin{aligned} Z_{7:7} &= C + hP [(Q_{7:7} - Q_{7:7})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(4.421-4.421)] \\ &= \text{Rp.} 625.000 \end{aligned}$$

$$\begin{aligned} Z_{7:8} &= C + hP [(Q_{7:8} - Q_{7:7}) + (Q_{7:8} - Q_{7:8})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(12.660-4.421) + (12.660-12.660)] \\ &= \text{Rp.}6.804.250 \end{aligned}$$

$$\begin{aligned} Z_{7:9} &= C + hP [(Q_{7:9} - Q_{7:7}) + (Q_{7:9} - Q_{7:8}) + (Q_{7:9} - Q_{7:9})] \\ &= \text{Rp.} 625.000 + (0,015 \times \text{Rp.}50.000) [(18.130-4.421) + (18.130-12.660) + \\ &\quad (18.130-18.130)] \\ &= \text{Rp.}15.009.250 \end{aligned}$$

$$Z_{7:10} = C + hP [(Q_{7:10} - Q_{7:7}) + (Q_{7:10} - Q_{7:8}) + (Q_{7:10} - Q_{7:9}) + (Q_{7:10} - Q_{7:10})]$$

$$\begin{aligned}
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(20.580-4.421) + (20.580-12.660) + \\
&\quad (20.580-18.130) + (20.580-20.580)] \\
&= \text{Rp.}20.521.750
\end{aligned}$$

$$\begin{aligned}
Z_{7:11} &= C + hP [(Q_{7:11} - Q_{7:7}) + (Q_{7:11} - Q_{7:8}) + (Q_{7:11} - Q_{7:9}) + (Q_{7:11} - \\
&\quad Q_{7:10}) + (Q_{7:11} - Q_{7:11})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(21.358-4.421) + (21.358-12.660) + \\
&\quad (21.358-18.130) + (21.358-20.580) + (21.358-21.358)] \\
&= \text{Rp.}22.855.750
\end{aligned}$$

$$\begin{aligned}
Z_{7:12} &= C + hP [(Q_{7:12} - Q_{7:7}) + (Q_{7:12} - Q_{7:8}) + (Q_{7:12} - Q_{7:9}) + (Q_{7:12} - \\
&\quad Q_{7:10}) + (Q_{7:12} - Q_{7:11}) + (Q_{7:12} - Q_{7:12})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(27.863-4.421) + (27.863-12.660) + \\
&\quad (27.863-18.130) + (27.863-20.580) + (27.863-21.358) + (27.863-27.863)] \\
&= \text{Rp.}47.249.500
\end{aligned}$$

$$\begin{aligned}
Z_{8:8} &= C + hP [(Q_{8:8} - Q_{8:8})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(8.239-8.239)] \\
&= \text{Rp. } 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{8:9} &= C + hP [(Q_{8:9} - Q_{8:8}) + (Q_{8:9} - Q_{8:9})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(13.709-8.239) + (13.709-13.709)] \\
&= \text{Rp.}4.727.500
\end{aligned}$$

$$\begin{aligned}
Z_{8:10} &= C + hP [(Q_{8:10} - Q_{8:8}) + (Q_{8:10} - Q_{8:9}) + (Q_{8:10} - Q_{8:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(16.159-8.239) + (16.159-13.709) + \\
&\quad (16.159-16.159)] \\
&= \text{Rp.}8.402.500
\end{aligned}$$

$$Z_{8:11} = C + hP [(Q_{8:11} - Q_{8:8}) + (Q_{8:11} - Q_{8:9}) + (Q_{8:11} - Q_{8:10}) + (Q_{8:11} - Q_{8:11})]$$

$$\begin{aligned}
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(16.937-8.239) + (16.937-13.709) + \\
&\quad (16.937-16.159) + (16.937-16.937)] \\
&= \text{Rp.}10.153.000
\end{aligned}$$

$$\begin{aligned}
Z_{8:12} &= C + hP [(Q_{8:12} - Q_{8:8}) + (Q_{8:12} - Q_{8:9}) + (Q_{8:12} - Q_{8:10}) + (Q_{8:12} - \\
&\quad Q_{8:11}) + (Q_{8:12} - Q_{8:12})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(23.442-8.239) + (23.442-13.709) + \\
&\quad (23.442-16.159) + (23.442-16.937) + (23.442-23.442)] \\
&= \text{Rp.}29.668.000
\end{aligned}$$

$$\begin{aligned}
Z_{9:9} &= C + hP [(Q_{9:9} - Q_{9:9})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(5.470-5.470)] \\
&= \text{Rp. } 625.000
\end{aligned}$$

$$\begin{aligned}
Z_{9:10} &= C + hP [(Q_{9:10} - Q_{9:9}) + (Q_{9:10} - Q_{9:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(5.470-5.470) + (7.920-7.920)] \\
&= \text{Rp.}2.462.500
\end{aligned}$$

$$\begin{aligned}
Z_{9:11} &= C + hP [(Q_{9:11} - Q_{9:9}) + (Q_{9:11} - Q_{9:10}) + (Q_{9:11} - Q_{9:11})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(8.698-5.470) + (8.698-7.920) + \\
&\quad (8.698-8.698)] \\
&= \text{Rp.}3.629.500
\end{aligned}$$

$$\begin{aligned}
Z_{9:12} &= C + hP [(Q_{9:12} - Q_{9:9}) + (Q_{9:12} - Q_{9:10}) + (Q_{9:12} - Q_{9:11}) + (Q_{9:12} - Q_{9:12})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(15.203-5.470) + (15.203-7.920) + \\
&\quad (15.203-8.698) + (15.203-15.203)] \\
&= \text{Rp.}18.265.750
\end{aligned}$$

$$\begin{aligned}
Z_{10:10} &= C + hP [(Q_{10:10} - Q_{10:10})] \\
&= \text{Rp. } 625.000 + (0,015 \times \text{Rp.}50.000) [(2.450-2.450)]
\end{aligned}$$

$$= \text{Rp. } 625.000$$

$$Z_{10:11} = C + hP [(Q_{10:11} - Q_{10:10}) + (Q_{10:11} - Q_{10:11})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(3.228 - 2.450) + (3.228 - 3.228)]$$

$$= \text{Rp. } 1.208.500$$

$$Z_{10:12} = C + hP [(Q_{10:12} - Q_{10:10}) + (Q_{10:12} - Q_{10:11}) + (Q_{10:12} - Q_{10:12})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(9.733 - 2.450) + (9.733 - 3.228) + (9.733 - 9.733)]$$

$$= \text{Rp. } 10.966.000$$

$$Z_{11:11} = C + hP [(Q_{11:11} - Q_{11:11})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(778 - 778)]$$

$$= \text{Rp. } 625.000$$

$$Z_{11:12} = C + hP [(Q_{11:12} - Q_{11:11}) + (Q_{11:12} - Q_{11:12})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(7.283 - 778) + (7.283 - 7.283)]$$

$$= \text{Rp. } 5.503.750$$

$$Z_{12:12} = C + hP [(Q_{12:12} - Q_{12:12})]$$

$$= \text{Rp. } 625.000 + (0,015 \times \text{Rp. } 50.000) [(6.505 - 6.505)]$$

$$= \text{Rp. } 625.000$$

- Perhitungan *variable cost* (Z_{ce}) Cengkeh:

$$Z_{1:1} = C + hP [(Q_{1:1} - Q_{1:1})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(2.123 - 2.123)]$$

$$= \text{Rp. } 275.000$$

$$Z_{1:2} = C + hP [(Q_{1:2} - Q_{1:1}) + (Q_{1:2} - Q_{1:2})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(2.123 - 2.123) + (5.195 - 5.195)]$$

$$= \text{Rp. } 6.265.400$$

$$\begin{aligned}
Z_{1:3} &= C + hP [(Q_{1:3} - Q_{1:1}) + (Q_{1:3} - Q_{1:2}) + (Q_{1:3} - Q_{1:3})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(8.895 - 2.123) + (8.895 - 5.195) + \\
&\quad (8.895 - 8.895)] \\
&= \text{Rp. } 20.695.400
\end{aligned}$$

$$\begin{aligned}
Z_{1:4} &= C + hP [(Q_{1:4} - Q_{1:1}) + (Q_{1:4} - Q_{1:2}) + (Q_{1:4} - Q_{1:3}) + (Q_{1:4} - Q_{1:4})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(14.410 - 2.123) + (14.410 - 5.195) + \\
&\quad (14.410 - 8.895) + (14.410 - 14.410)] \\
&= \text{Rp. } 52.958.150
\end{aligned}$$

$$\begin{aligned}
Z_{1:5} &= C + hP [(Q_{1:5} - Q_{1:1}) + (Q_{1:5} - Q_{1:2}) + (Q_{1:5} - Q_{1:3}) + (Q_{1:5} - Q_{1:4}) \\
&\quad (Q_{1:5} - Q_{1:5})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(18.185 - 2.123) + (18.185 - 5.195) + \\
&\quad (18.185 - 8.895) + (18.185 - 14.410) + (18.185 - 18.185)] \\
&= \text{Rp. } 82.403.150
\end{aligned}$$

$$\begin{aligned}
Z_{1:6} &= C + hP [(Q_{1:6} - Q_{1:1}) + (Q_{1:6} - Q_{1:2}) + (Q_{1:6} - Q_{1:3}) + (Q_{1:6} - Q_{1:4}) \\
&\quad + (Q_{1:6} - Q_{1:5}) + (Q_{1:6} - Q_{1:6})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(18.668 - 2.123) + (18.668 - 5.195) + \\
&\quad (18.668 - 8.895) + (18.668 - 14.410) + (18.668 - 18.185) + (18.668 - 18.668)] \\
&= \text{Rp. } 87.112.400
\end{aligned}$$

$$\begin{aligned}
Z_{1:7} &= C + hP [(Q_{1:7} - Q_{1:1}) + (Q_{1:7} - Q_{1:2}) + (Q_{1:7} - Q_{1:3}) + (Q_{1:7} - Q_{1:4}) \\
&\quad + (Q_{1:7} - Q_{1:5}) + (Q_{1:7} - Q_{1:6}) + (Q_{1:7} - Q_{1:7})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(21.321 - 2.123) + (21.321 - 5.195) + \\
&\quad (21.321 - 8.895) + (21.321 - 14.410) + (21.321 - 18.185) + (21.321 - 18.668) + \\
&\quad (21.321 - 21.321)] \\
&= \text{Rp. } 118.152.500
\end{aligned}$$

$$\begin{aligned}
Z_{1:8} &= C + hP [(Q_{1:8} - Q_{1:1}) + (Q_{1:8} - Q_{1:2}) + (Q_{1:8} - Q_{1:3}) + (Q_{1:8} - Q_{1:4}) \\
&\quad + (Q_{1:8} - Q_{1:5}) + (Q_{1:8} - Q_{1:6}) + (Q_{1:8} - Q_{1:7}) + (Q_{1:8} - Q_{1:8})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(26.265 - 2.123) + (26.265 - 5.195) + \\
&\quad (26.265 - 8.895) + (26.265 - 14.410) + (26.265 - 18.185) + (26.265 - 18.668) + \\
&\quad (26.265 - 21.321) + (26.265 - 26.265)] \\
&= \text{Rp. } 185.638.100
\end{aligned}$$

$$\begin{aligned}
Z_{1:9} &= C + hP [(Q_{1:9} - Q_{1:1}) + (Q_{1:9} - Q_{1:2}) + (Q_{1:9} - Q_{1:3}) + (Q_{1:9} - Q_{1:4}) \\
&\quad + (Q_{1:9} - Q_{1:5}) + (Q_{1:9} - Q_{1:6}) + (Q_{1:9} - Q_{1:7}) + (Q_{1:9} - Q_{1:8}) + (Q_{1:9} - \\
&\quad Q_{1:9})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(29.547 - 2.123) + (29.547 - 5.195) + \\
&\quad (29.547 - 8.895) + (29.547 - 14.410) + (29.547 - 18.185) + (29.547 - 18.668) + \\
&\quad (29.547 - 21.321) + (29.547 - 26.265) + (29.547 - 29.547)] \\
&= \text{Rp. } 236.837.300
\end{aligned}$$

$$\begin{aligned}
Z_{1:10} &= C + hP [(Q_{1:10} - Q_{1:1}) + (Q_{1:10} - Q_{1:2}) + (Q_{1:10} - Q_{1:3}) + (Q_{1:10} - Q_{1:4}) \\
&\quad + (Q_{1:10} - Q_{1:5}) + (Q_{1:10} - Q_{1:6}) + (Q_{1:10} - Q_{1:7}) + (Q_{1:10} - Q_{1:8}) + \\
&\quad (Q_{1:10} - Q_{1:9}) + (Q_{1:10} - Q_{1:10})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(31.017 - 2.123) + (31.017 - 5.195) + \\
&\quad (31.017 - 8.895) + (31.017 - 14.410) + (31.017 - 18.185) + (31.017 - 18.668) + \\
&\quad (31.017 - 21.321) + (31.017 - 26.265) + (31.017 - 29.547) + (31.017 - 31.017)] \\
&= \text{Rp. } 262.635.800
\end{aligned}$$

$$\begin{aligned}
Z_{1:11} &= C + hP [(Q_{1:11} - Q_{1:1}) + (Q_{1:11} - Q_{1:2}) + (Q_{1:11} - Q_{1:3}) + (Q_{1:11} - Q_{1:4}) \\
&\quad + (Q_{1:11} - Q_{1:5}) + (Q_{1:11} - Q_{1:6}) + (Q_{1:11} - Q_{1:7}) + (Q_{1:11} - Q_{1:8}) + \\
&\quad (Q_{1:11} - Q_{1:9}) + (Q_{1:11} - Q_{1:10}) + (Q_{1:11} - Q_{1:11})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(31.484 - 2.123) + (31.484 - 5.195) +
\end{aligned}$$

$$\begin{aligned}
& (31.484-8.895) + (31.484-14.410) + (31.484- 18.185) + (31.484-18.668) + \\
& (31.484- 21.321) + (31.484- 26.265) + (31.484- 29.547) + (31.484- 31.017) \\
& + (31.484- 31.484)] \\
& = \text{Rp.}271.742.300
\end{aligned}$$

$$\begin{aligned}
Z_{1:12} &= C + hP [(Q_{1:12} - Q_{1:1}) + (Q_{1:12} - Q_{1:2}) + (Q_{1:12} - Q_{1:3}) + (Q_{1:12} - Q_{1:4}) \\
& + (Q_{1:12} - Q_{1:5}) + (Q_{1:12} - Q_{1:6}) + (Q_{1:12} - Q_{1:7}) + (Q_{1:12} - Q_{1:8}) + \\
& (Q_{1:12} - Q_{1:9}) + (Q_{1:12} - Q_{1:10}) + (Q_{1:12} - Q_{1:11}) + (Q_{1:12} - Q_{1:12})] \\
& = \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(35.387-2.123) + (35.387-5.195) + \\
& (35.387-8.895) + (35.387-14.410) + (35.387- 18.185) + (35.387-18.668) + \\
& (35.387- 21.321) + (35.387- 26.265) + (35.387- 29.547) + (35.387- 31.017) \\
& + (35.387- 31.484) + (35.387 - 35.387)] \\
& = \text{Rp.}355.461.650
\end{aligned}$$

$$\begin{aligned}
Z_{2:2} &= C + hP [(Q_{2:2} - Q_{2:2})] \\
& = \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(3.072-3.072)] \\
& = \text{Rp.}275.000
\end{aligned}$$

$$\begin{aligned}
Z_{2:3} &= C + hP [(Q_{2:3} - Q_{2:2}) + (Q_{2:3} - Q_{2:3})] \\
& = \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(3.072-3.072) + (6.772- 6.772)] \\
& = \text{Rp.}7.490.000
\end{aligned}$$

$$\begin{aligned}
Z_{2:4} &= C + hP [(Q_{2:4} - Q_{2:2}) + (Q_{2:4} - Q_{2:3}) + (Q_{2:4} - Q_{2:4})] \\
& = \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(12.287-3.072) + (12.287- 6.772) + \\
& (12.287- 12.287)] \\
& = \text{Rp.}28.998.500
\end{aligned}$$

$$Z_{2:5} = C + hP [(Q_{2:5} - Q_{2:2}) + (Q_{2:5} - Q_{2:3}) + (Q_{2:5} - Q_{2:4}) + (Q_{2:5} - Q_{2:5})]$$

$$\begin{aligned}
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(16.062-3.072) + (16.062- 6.772) + \\
&(16.062- 12.287) + (16.062 - 16.062)] \\
&= \text{Rp.}51.082.250
\end{aligned}$$

$$\begin{aligned}
Z_{2:6} &= C + hP [(Q_{2:6} - Q_{2:2}) + (Q_{2:6} - Q_{2:3}) + (Q_{2:6} - Q_{2:4}) + (Q_{2:6} - Q_{2:5}) \\
&\quad + (Q_{2:6} - Q_{2:6})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(16.545-3.072) + (16.545- 6.772) + \\
&(16.545 - 12.287) + (16.545 - 16.062) + (16.545 - 16.545)] \\
&= \text{Rp.}54.849.650
\end{aligned}$$

$$\begin{aligned}
Z_{2:7} &= C + hP [(Q_{2:7} - Q_{2:2}) + (Q_{2:7} - Q_{2:3}) + (Q_{2:7} - Q_{2:4}) + (Q_{2:7} - Q_{2:5}) \\
&\quad + (Q_{2:7} - Q_{2:6}) + (Q_{2:7} - Q_{2:7})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(19.198-3.072) + (19.198- 6.772) + \\
&(19.198 - 12.287) + (19.198 - 16.062) + (19.198 - 16.545) + (19.198 - \\
&19.198)] \\
&= \text{Rp.}80.716.400
\end{aligned}$$

$$\begin{aligned}
Z_{2:8} &= C + hP [(Q_{2:8} - Q_{2:2}) + (Q_{2:8} - Q_{2:3}) + (Q_{2:8} - Q_{2:4}) + (Q_{2:8} - Q_{2:5}) + \\
&\quad (Q_{2:8} - Q_{2:6}) + (Q_{2:8} - Q_{2:7}) + (Q_{2:8} - Q_{2:8})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(24.142-3.072) + (24.142- 6.772) + \\
&(24.142 - 12.287) + (24.142 - 16.062) + (24.142 - 16.545) + (24.142 - 19.198) \\
&+ (24.142- 24.142)] \\
&= \text{Rp.}138.561.200
\end{aligned}$$

$$\begin{aligned}
Z_{2:9} &= C + hP [(Q_{2:9} - Q_{2:2}) + (Q_{2:9} - Q_{2:3}) + (Q_{2:9} - Q_{2:4}) + (Q_{2:9} - Q_{2:5}) + \\
&\quad (Q_{2:9} - Q_{2:6}) + (Q_{2:9} - Q_{2:7}) + (Q_{2:9} - Q_{2:8}) + (Q_{2:9} - Q_{2:9})]
\end{aligned}$$

$$\begin{aligned}
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(27.424-3.072) + (27.424- 6.772) + \\
&(27.424 - 12.287) + (27.424 - 16.062) + (27.424 - 16.545) + (27.424 - 19.198) \\
&+ (27.424- 24.142) + (27.424- 27.424)] \\
&= \text{Rp.}183.360.500
\end{aligned}$$

$$\begin{aligned}
Z_{2:10} &= C + hP [(Q_{2:10} - Q_{2:2}) + (Q_{2:10} - Q_{2:3}) + (Q_{2:10} - Q_{2:4}) + (Q_{2:10} - \\
&Q_{2:5}) + (Q_{2:10} - Q_{2:6}) + (Q_{2:10} - Q_{2:7}) + (Q_{2:10} - Q_{2:8}) + (Q_{2:10} - \\
&Q_{2:9}) + (Q_{2:10} - Q_{2:10})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(28.894-3.072) + (28.894- 6.772) + \\
&(28.894 - 12.287) + (28.894 - 16.062) + (28.894 - 16.545) + (28.894 - 19.198) \\
&+ (28.894- 24.142) + (28.894- 27.424) + (28.894- 28.894)] \\
&= \text{Rp.}206.292.500
\end{aligned}$$

$$\begin{aligned}
Z_{2:11} &= C + hP [(Q_{2:11} - Q_{2:2}) + (Q_{2:11} - Q_{2:3}) + (Q_{2:11} - Q_{2:4}) + (Q_{2:11} - \\
&Q_{2:5}) + (Q_{2:11} - Q_{2:6}) + (Q_{2:11} - Q_{2:7}) + (Q_{2:11} - Q_{2:8}) + (Q_{2:11} - \\
&Q_{2:9}) + (Q_{2:11} - Q_{2:10}) + (Q_{2:11} - Q_{2:11})] \\
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(29.361-3.072) + (29.361- 6.772) + \\
&(29.361 - 12.287) + (29.361 - 16.062) + (29.361 - 16.545) + (29.361 - 19.198) \\
&+ (29.361- 24.142) + (29.361- 27.424) + (29.361- 28.894) + (29.361- \\
&29.361)] \\
&= \text{Rp.}214.488.350
\end{aligned}$$

$$\begin{aligned}
Z_{2:12} &= C + hP [(Q_{2:12} - Q_{2:2}) + (Q_{2:12} - Q_{2:3}) + (Q_{2:12} - Q_{2:4}) + (Q_{2:12} - \\
&Q_{2:5}) + (Q_{2:12} - Q_{2:6}) + (Q_{2:12} - Q_{2:7}) + (Q_{2:12} - Q_{2:8}) + (Q_{2:12} - \\
&Q_{2:9}) + (Q_{2:12} - Q_{2:10}) + (Q_{2:12} - Q_{2:11}) + (Q_{2:12} - Q_{2:12})]
\end{aligned}$$

$$\begin{aligned}
&= \text{Rp. } 275.000 + (0.015 \times \text{Rp. } 130.000)[(33.264 - 3.072) + (33.264 - 6.772) + \\
&(33.264 - 12.287) + (33.264 - 16.062) + (33.264 - 16.545) + (33.264 - 19.198) \\
&+ (33.264 - 24.142) + (33.264 - 27.424) + (33.264 - 28.894) + (33.264 - 29.361) \\
&+ (33.264 - 33.264)] \\
&= \text{Rp. } 290.596.850
\end{aligned}$$

$$\begin{aligned}
Z_{3:3} &= C + hP [(Q_{3:3} - Q_{3:3})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.700 - 3.700)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{3:4} &= C + hP [(Q_{3:4} - Q_{3:3}) + (Q_{3:4} - Q_{3:4})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.700 - 3.700) + (9.215 - 9.215)] \\
&= \text{Rp. } 11.029.250
\end{aligned}$$

$$\begin{aligned}
Z_{3:5} &= C + hP [(Q_{3:5} - Q_{3:3}) + (Q_{3:5} - Q_{3:4}) + (Q_{3:5} - Q_{3:5})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(12.990 - 3.700) + (12.990 - 9.215) + \\
&(12.990 - 12.990)] \\
&= \text{Rp. } 25.751.750
\end{aligned}$$

$$\begin{aligned}
Z_{3:6} &= C + hP [(Q_{3:6} - Q_{3:3}) + (Q_{3:6} - Q_{3:4}) + (Q_{3:6} - Q_{3:5}) + (Q_{3:6} - Q_{3:6})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(13.473 - 3.700) + (13.473 - 9.215) + \\
&(13.473 - 12.990) + (13.473 - 13.473)] \\
&= \text{Rp. } 28.577.300
\end{aligned}$$

$$\begin{aligned}
Z_{3:7} &= C + hP [(Q_{3:7} - Q_{3:3}) + (Q_{3:7} - Q_{3:4}) + (Q_{3:7} - Q_{3:5}) + (Q_{3:7} - Q_{3:6}) + \\
&(Q_{3:7} - Q_{3:7})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(16.126 - 3.700) + (16.126 - 9.215) + \\
&(16.126 - 12.990) + (16.126 - 13.473) + (16.126 - 16.126)] \\
&= \text{Rp. } 49.270.700
\end{aligned}$$

$$\begin{aligned}
Z_{3:8} &= C + hP [(Q_{3:8} - Q_{3:3}) + (Q_{3:8} - Q_{3:4}) + (Q_{3:8} - Q_{3:5}) + (Q_{3:8} - Q_{3:6}) + \\
&\quad (Q_{3:8} - Q_{3:7}) + (Q_{3:8} - Q_{3:8})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(21.070 - 3.700) + (21.070 - 9.215) + \\
&\quad (21.070 - 12.990) + (21.070 - 13.473) + (21.070 - 16.126) + (21.070 - 21.070)] \\
&= \text{Rp. } 97.474.700
\end{aligned}$$

$$\begin{aligned}
Z_{3:9} &= C + hP [(Q_{3:9} - Q_{3:3}) + (Q_{3:9} - Q_{3:4}) + (Q_{3:9} - Q_{3:5}) + (Q_{3:9} - Q_{3:6}) + \\
&\quad (Q_{3:9} - Q_{3:7}) + (Q_{3:9} - Q_{3:8}) + (Q_{3:9} - Q_{3:9})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(24.352 - 3.700) + (24.352 - 9.215) + \\
&\quad (24.352 - 12.990) + (24.352 - 13.473) + (24.352 - 16.126) + (24.352 - 21.070) \\
&\quad + (24.352 - 24.352)] \\
&= \text{Rp. } 13.5874.100
\end{aligned}$$

$$\begin{aligned}
Z_{3:10} &= C + hP [(Q_{3:10} - Q_{3:3}) + (Q_{3:10} - Q_{3:4}) + (Q_{3:10} - Q_{3:5}) + (Q_{3:10} - Q_{3:6}) + \\
&\quad (Q_{3:10} - Q_{3:7}) + (Q_{3:10} - Q_{3:8}) + (Q_{3:10} - Q_{3:9}) + (Q_{3:10} - Q_{3:10})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(25.822 - 3.700) + (25.822 - 9.215) + \\
&\quad (25.822 - 12.990) + (25.822 - 13.473) + (25.822 - 16.126) + (25.822 - 21.070) \\
&\quad + (25.822 - 24.352) + (25.822 - 25.822)] \\
&= \text{Rp. } 155.939.600
\end{aligned}$$

$$\begin{aligned}
Z_{3:11} &= C + hP [(Q_{3:11} - Q_{3:3}) + (Q_{3:11} - Q_{3:4}) + (Q_{3:11} - Q_{3:5}) + (Q_{3:11} - Q_{3:6}) + \\
&\quad (Q_{3:11} - Q_{3:7}) + (Q_{3:11} - Q_{3:8}) + (Q_{3:11} - Q_{3:9}) + (Q_{3:11} - Q_{3:10}) + (Q_{3:11} - \\
&\quad Q_{3:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(26.289 - 3.700) + (26.289 - 9.215) + \\
&\quad (26.289 - 12.990) + (26.289 - 13.473) + (26.289 - 16.126) + (26.289 - 21.070) \\
&\quad + (26.289 - 24.352) + (26.289 - 25.822) + (26.289 - 26.289)] \\
&= \text{Rp. } 163.224.800
\end{aligned}$$

$$\begin{aligned}
Z_{3:12} &= C + hP [(Q_{3:12} - Q_{3:3}) + (Q_{3:12} - Q_{3:4}) + (Q_{3:12} - Q_{3:5}) + (Q_{3:12} - Q_{3:6}) \\
&\quad + (Q_{3:12} - Q_{3:7}) + (Q_{3:12} - Q_{3:8}) + (Q_{3:12} - Q_{3:9}) + (Q_{3:12} - Q_{3:10}) \\
&\quad + (Q_{3:12} - Q_{3:11}) + (Q_{3:12} - Q_{3:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(30.192 - 3.700) + (30.192 - 9.215) + \\
&\quad (30.192 - 12.990) + (30.192 - 13.473) + (30.192 - 16.126) + (30.192 - 21.070) \\
&\quad + (30.192 - 24.352) + (30.192 - 25.822) + (30.192 - 26.289) + (30.192 - \\
&\quad 30.192)] \\
&= \text{Rp. } 231.722.450
\end{aligned}$$

$$\begin{aligned}
Z_{4:4} &= C + hP [(Q_{4:4} - Q_{4:4})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000)[(5.515 - 5.515)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:5} &= C + hP [(Q_{4:5} - Q_{4:4}) + (Q_{4:5} - Q_{4:5})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000)[(9.290 - 5.515) + (9.290 - 9.290)] \\
&= \text{Rp. } 7.636.250
\end{aligned}$$

$$\begin{aligned}
Z_{4:6} &= C + hP [(Q_{4:6} - Q_{4:4}) + (Q_{4:6} - Q_{4:5}) + (Q_{4:6} - Q_{4:6})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000)[(9.773 - 5.515) + (9.773 - 9.290) + \\
&\quad (9.773 - 9.773)] \\
&= \text{Rp. } 9.519.950
\end{aligned}$$

$$\begin{aligned}
Z_{4:7} &= C + hP [(Q_{4:7} - Q_{4:4}) + (Q_{4:7} - Q_{4:5}) + (Q_{4:7} - Q_{4:6}) + (Q_{4:7} - Q_{4:7})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000)[(12.426 - 5.515) + (12.426 - 9.290) + \\
&\quad (12.426 - 9.773) + (12.426 - 12.426)] \\
&= \text{Rp. } 25.040.000
\end{aligned}$$

$$\begin{aligned}
Z_{4:8} &= C + hP [(Q_{4:8} - Q_{4:4}) + (Q_{4:8} - Q_{4:5}) + (Q_{4:8} - Q_{4:6}) + (Q_{4:8} - \\
&\quad Q_{4:7}) + (Q_{4:8} - Q_{4:8})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000)[(17.370-5.515) + (17.370-9.290) + \\
&\quad (17.370-9.773) + (17.370-12.426) + (17.370-17.370)] \\
&= \text{Rp.}63.603.200
\end{aligned}$$

$$\begin{aligned}
Z_{4:9} &= C + hP [(Q_{4:9} - Q_{4:4}) + (Q_{4:9} - Q_{4:5}) + (Q_{4:9} - Q_{4:6}) + (Q_{4:9} - \\
&\quad Q_{4:7}) + (Q_{4:9} - Q_{4:8}) + (Q_{4:9} - Q_{4:9})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000)[(20.652-5.515) + (20.652-9.290) + \\
&\quad (20.652-9.773) + (20.652-12.426) + (20.652-17.370) + (20.652-20.652)] \\
&= \text{Rp.}95.602.700
\end{aligned}$$

$$\begin{aligned}
Z_{4:10} &= C + hP [(Q_{4:10} - Q_{4:4}) + (Q_{4:10} - Q_{4:5}) + (Q_{4:10} - Q_{4:6}) + (Q_{4:10} - \\
&\quad Q_{4:7}) + (Q_{4:10} - Q_{4:8}) + (Q_{4:10} - Q_{4:9}) + (Q_{4:10} - Q_{4:10})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000)[(22.122-5.515) + (22.122-9.290) + \\
&\quad (22.122-9.773) + (22.122-12.426) + (22.122-17.370) + (22.122-20.652) + \\
&\quad (22.122-22.122)] \\
&= \text{Rp.}112.801.700
\end{aligned}$$

$$\begin{aligned}
Z_{4:11} &= C + hP [(Q_{4:11} - Q_{4:4}) + (Q_{4:11} - Q_{4:5}) + (Q_{4:11} - Q_{4:6}) + (Q_{4:11} - \\
&\quad Q_{4:7}) + (Q_{4:11} - Q_{4:8}) + (Q_{4:11} - Q_{4:9}) + (Q_{4:11} - Q_{4:10}) + (Q_{4:11} - \\
&\quad Q_{4:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000)[(22.589-5.515) + (22.589-9.290) + \\
&\quad (22.589-9.773) + (22.589-12.426) + (22.589-17.370) + (22.589-20.652) + \\
&\quad (22.589-22.122) + (22.589-22.589)] \\
&= \text{Rp.}119.176.250
\end{aligned}$$

$$\begin{aligned}
Z_{4:12} &= C + hP [(Q_{4:12} - Q_{4:4}) + (Q_{4:12} - Q_{4:5}) + (Q_{4:12} - Q_{4:6}) \\
&\quad + (Q_{4:12} - Q_{4:7}) + (Q_{4:12} - Q_{4:8}) + (Q_{4:12} - Q_{4:9}) \\
&\quad + (Q_{4:12} - Q_{4:10}) + (Q_{4:12} - Q_{4:11}) + (Q_{4:12} - Q_{4:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000)[(26.492-5.515) + (26.492-9.290) + \\
&\quad (26.492-9.773) + (26.492-12.426) + (26.492-17.370) + (26.492-20.652) + \\
&\quad (26.492-22.122) + (26.492-22.589) + (26.492-26.492)] \\
&= \text{Rp.}180.063.050
\end{aligned}$$

$$\begin{aligned}
Z_{5:5} &= C + hP [(Q_{5:5} - Q_{5:5})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(3.775-3.775)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{5:6} &= C + hP [(Q_{5:6} - Q_{5:5}) + (Q_{5:6} - Q_{5:6})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(3.775-3.775) + (4.258-4.258)] \\
&= \text{Rp.}1.216.850
\end{aligned}$$

$$\begin{aligned}
Z_{5:7} &= C + hP [(Q_{5:7} - Q_{5:5}) + (Q_{5:7} - Q_{5:6}) + (Q_{5:7} - Q_{5:7})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(6.911-3.775) + (6.911-4.258) + \\
&\quad (6.911-6.911)] \\
&= \text{Rp.}11.563.550
\end{aligned}$$

$$\begin{aligned}
Z_{5:8} &= C + hP [(Q_{5:8} - Q_{5:5}) + (Q_{5:8} - Q_{5:6}) + (Q_{5:8} - Q_{5:7}) + (Q_{5:8} - Q_{5:8})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(11.855-3.775) + (11.855-4.258) + \\
&\quad (11.855-6.911) + (11.855-11.855)] \\
&= \text{Rp.}40.485.950
\end{aligned}$$

$$\begin{aligned}
Z_{5:9} &= C + hP [(Q_{5:9} - Q_{5:5}) + (Q_{5:9} - Q_{5:6}) + (Q_{5:9} - Q_{5:7}) + (Q_{5:9} - Q_{5:8}) + \\
&\quad (Q_{5:9} - Q_{5:9})]
\end{aligned}$$

$$\begin{aligned}
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(15.137-3.775) + (15.137-4.258) + \\
&\quad (15.137-6.911) + (15.137-11.855) + (15.137-15.137)] \\
&= \text{Rp.}66.085.550
\end{aligned}$$

$$\begin{aligned}
Z_{5:10} &= C + hP [(Q_{5:10} - Q_{5:5}) + (Q_{5:10} - Q_{5:6}) + (Q_{5:10} - Q_{5:7}) + (Q_{5:10} - Q_{5:8}) + \\
&\quad (Q_{5:10} - Q_{5:9}) + (Q_{5:10} - Q_{5:10})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(16.607-3.775) + (16.607-4.258) + \\
&\quad (16.607-6.911) + (16.607-11.855) + (16.607-15.137) + (16.607-16.607)] \\
&= \text{Rp.}80.418.050
\end{aligned}$$

$$\begin{aligned}
Z_{5:11} &= C + hP [(Q_{5:11} - Q_{5:5}) + (Q_{5:11} - Q_{5:6}) + (Q_{5:11} - Q_{5:7}) + (Q_{5:11} - Q_{5:8}) + \\
&\quad (Q_{5:11} - Q_{5:9}) + (Q_{5:11} - Q_{5:10}) + (Q_{5:11} - Q_{5:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(17.074-3.775) + (17.074-4.258) + \\
&\quad (17.074-6.911) + (17.074-11.855) + (17.074-15.137) + (17.074-16.607) + \\
&\quad (17.074-17.074)] \\
&= \text{Rp.}85.881.950
\end{aligned}$$

$$\begin{aligned}
Z_{5:12} &= C + hP [(Q_{5:12} - Q_{5:5}) + (Q_{5:12} - Q_{5:6}) + (Q_{5:12} - Q_{5:7}) + (Q_{5:12} - Q_{5:8}) + \\
&\quad (Q_{5:12} - Q_{5:9}) + (Q_{5:12} - Q_{5:10}) + (Q_{5:12} - Q_{5:11}) + (Q_{5:12} - Q_{5:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(20.977-3.775) + (20.977-4.258) + \\
&\quad (20.977-6.911) + (20.977-11.855) + (20.977-15.137) + (20.977-16.607) + \\
&\quad (20.977-17.074) + (20.977-20.977)] \\
&= \text{Rp.}139.157.900
\end{aligned}$$

$$\begin{aligned}
Z_{6:6} &= C + hP [(Q_{6:6} - Q_{6:6})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp.}130.000) [(483-483)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$Z_{6:7} = C + hP [(Q_{6:7} - Q_{6:6}) + (Q_{6:7} - Q_{6:7})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.136-483) + (3.136-3.136)]$$

$$= \text{Rp. } 5.448.350$$

$$Z_{6:8} = C + hP [(Q_{6:8} - Q_{6:6}) + (Q_{6:8} - Q_{6:7}) + (Q_{6:8} - Q_{6:8})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(8.080-483) + (8.080-3.136) + (8.080-8.080)]$$

$$= \text{Rp. } 24.729.950$$

$$Z_{6:9} = C + hP [(Q_{6:9} - Q_{6:6}) + (Q_{6:9} - Q_{6:7}) + (Q_{6:9} - Q_{6:8}) + (Q_{6:9} - Q_{6:9})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(11.362-483) + (11.362-3.136) + (11.362-8.080) + (11.362-11.362)]$$

$$= \text{Rp. } 43.929.650$$

$$Z_{6:10} = C + hP [(Q_{6:10} - Q_{6:6}) + (Q_{6:10} - Q_{6:7}) + (Q_{6:10} - Q_{6:8}) + (Q_{6:10} - Q_{6:9}) + (Q_{6:10} - Q_{6:10})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(12.832-483) + (12.832-3.136) + (12.832-8.080) + (12.832-11.362) + (12.832-12.832)]$$

$$= \text{Rp. } 55.395.650$$

$$Z_{6:11} = C + hP [(Q_{6:11} - Q_{6:6}) + (Q_{6:11} - Q_{6:7}) + (Q_{6:11} - Q_{6:8}) + (Q_{6:11} - Q_{6:9}) + (Q_{6:11} - Q_{6:10}) + (Q_{6:11} - Q_{6:11})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(13.299-483) + (13.299-3.136) + (13.299-8.080) + (13.299-11.362) + (13.299-12.832) + (13.299-13.299)]$$

$$= \text{Rp. } 59.948.900$$

$$Z_{6:12} = C + hP [(Q_{6:12} - Q_{6:6}) + (Q_{6:12} - Q_{6:7}) + (Q_{6:12} - Q_{6:8}) + (Q_{6:12} - Q_{6:9}) + (Q_{6:12} - Q_{6:10}) + (Q_{6:12} - Q_{6:11}) + (Q_{6:12} - Q_{6:12})]$$

$$\begin{aligned}
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(17.202-483) + (17.202-3.136) + \\
&\quad (17.202-8.080) + (17.202-11.362) + (17.202-12.832) + (17.202-13.299) + \\
&\quad (17.202-17.202)] \\
&= \text{Rp. } 105.614.000
\end{aligned}$$

$$\begin{aligned}
Z_{7:7} &= C + hP [(Q_{7:7} - Q_{7:7})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(2.653-2.653)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{7:8} &= C + hP [(Q_{7:8} - Q_{7:7}) + (Q_{7:8} - Q_{7:8})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(7.597-2.653) + (7.597-7.597)] \\
&= \text{Rp. } 9.915.800
\end{aligned}$$

$$\begin{aligned}
Z_{7:9} &= C + hP [(Q_{7:9} - Q_{7:7}) + (Q_{7:9} - Q_{7:8}) + (Q_{7:9} - Q_{7:9})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(10.879-2.653) + (10.879-7.597) + \\
&\quad (10.879-10.879)] \\
&= \text{Rp. } 22.715.600
\end{aligned}$$

$$\begin{aligned}
Z_{7:10} &= C + hP [(Q_{7:10} - Q_{7:7}) + (Q_{7:10} - Q_{7:8}) + (Q_{7:10} - Q_{7:9}) + (Q_{7:10} - Q_{7:10})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(12.349-2.653) + (12.349-7.597) + \\
&\quad (12.349-10.879) + (12.349-12.349)] \\
&= \text{Rp. } 31.315.100
\end{aligned}$$

$$\begin{aligned}
Z_{7:11} &= C + hP [(Q_{7:11} - Q_{7:7}) + (Q_{7:11} - Q_{7:8}) + (Q_{7:11} - Q_{7:9}) + (Q_{7:11} - \\
&\quad Q_{7:10}) + (Q_{7:11} - Q_{7:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(12.816-2.653) + (12.816-7.597) + \\
&\quad (12.816-10.879) + (12.816-12.349) + (12.816-12.816)] \\
&= \text{Rp. } 34.957.700
\end{aligned}$$

$$\begin{aligned}
Z_{7:12} &= C + hP [(Q_{7:12} - Q_{7:7}) + (Q_{7:12} - Q_{7:8}) + (Q_{7:12} - Q_{7:9}) + (Q_{7:12} - \\
&\quad Q_{7:10}) + (Q_{7:12} - Q_{7:11}) + (Q_{7:12} - Q_{7:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(16.719 - 2.653) + (16.719 - 7.597) + \\
&\quad (16.719 - 10.879) + (16.719 - 12.349) + (16.719 - 12.816) + (16.719 - 16.719)] \\
&= \text{Rp. } 73.011.950
\end{aligned}$$

$$\begin{aligned}
Z_{8:8} &= C + hP [(Q_{8:8} - Q_{8:8})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(4.944 - 4.944)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{8:9} &= C + hP [(Q_{8:9} - Q_{8:8}) + (Q_{8:9} - Q_{8:9})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(8.226 - 4.944) + (8.226 - 8.226)] \\
&= \text{Rp. } 6.674.900
\end{aligned}$$

$$\begin{aligned}
Z_{8:10} &= C + hP [(Q_{8:10} - Q_{8:8}) + (Q_{8:10} - Q_{8:9}) + (Q_{8:10} - Q_{8:10})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(9.696 - 4.944) + (9.696 - 8.226) + \\
&\quad (9.696 - 9.696)] \\
&= \text{Rp. } 12.407.900
\end{aligned}$$

$$\begin{aligned}
Z_{8:11} &= C + hP [(Q_{8:11} - Q_{8:8}) + (Q_{8:11} - Q_{8:9}) + (Q_{8:11} - Q_{8:10}) + (Q_{8:11} - Q_{8:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(10.163 - 4.944) + (10.163 - 8.226) + \\
&\quad (10.163 - 9.696) + (10.163 - 10.163)] \\
&= \text{Rp. } 15.139.850
\end{aligned}$$

$$\begin{aligned}
Z_{8:12} &= C + hP [(Q_{8:12} - Q_{8:8}) + (Q_{8:12} - Q_{8:9}) + (Q_{8:12} - Q_{8:10}) + (Q_{8:12} - \\
&\quad Q_{8:11}) + (Q_{8:12} - Q_{8:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(14.066 - 4.944) + (14.066 - 8.226) + \\
&\quad (14.066 - 9.696) + (14.066 - 10.163) + (14.066 - 14.066)] \\
&= \text{Rp. } 45.583.250
\end{aligned}$$

$$Z_{9:9} = C + hP [(Q_{9:9} - Q_{9:9})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.282 - 3.282)]$$

$$= \text{Rp. } 275.000$$

$$Z_{9:10} = C + hP [(Q_{9:10} - Q_{9:9}) + (Q_{9:10} - Q_{9:10})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.282 - 3.282) + (4.752 - 4.752)]$$

$$= \text{Rp. } 3.141.500$$

$$Z_{9:11} = C + hP [(Q_{9:11} - Q_{9:9}) + (Q_{9:11} - Q_{9:10}) + (Q_{9:11} - Q_{9:11})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(5.219 - 3.282) + (5.219 - 4.752) + (5.219 - 5.219)]$$

$$= \text{Rp. } 4.962.800$$

$$Z_{9:12} = C + hP [(Q_{9:12} - Q_{9:9}) + (Q_{9:12} - Q_{9:10}) + (Q_{9:12} - Q_{9:11}) + (Q_{9:12} - Q_{9:12})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(9.122 - 3.282) + (9.122 - 4.752) + (9.122 - 5.219) + (9.122 - 9.122)]$$

$$= \text{Rp. } 27.795.350$$

$$Z_{10:10} = C + hP [(Q_{10:10} - Q_{10:10})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(1.470 - 1.470)]$$

$$= \text{Rp. } 275.000$$

$$Z_{10:11} = C + hP [(Q_{10:11} - Q_{10:10}) + (Q_{10:11} - Q_{10:11})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(1.937 - 1.470) + (1.937 - 1.937)]$$

$$= \text{Rp. } 1.185.650$$

$$Z_{10:12} = C + hP [(Q_{10:12} - Q_{10:10}) + (Q_{10:12} - Q_{10:11}) + (Q_{10:12} - Q_{10:12})]$$

$$= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(5.840 - 1.470) + (5.840 - 1.937) + (5.840 - 5.840)]$$

$$= \text{Rp. } 16.407.350$$

$$\begin{aligned}
Z_{11:11} &= C + hP [(Q_{11:11} - Q_{11:11})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(467-467)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

$$\begin{aligned}
Z_{11:12} &= C + hP [(Q_{11:12} - Q_{11:11}) + (Q_{11:12} - Q_{11:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(4.370-467) + (4.370-4.370)] \\
&= \text{Rp. } 7.885.850
\end{aligned}$$

$$\begin{aligned}
Z_{12:12} &= C + hP [(Q_{12:12} - Q_{12:12})] \\
&= \text{Rp. } 275.000 + (0,015 \times \text{Rp. } 130.000) [(3.903-3.903)] \\
&= \text{Rp. } 275.000
\end{aligned}$$

- Perhitungan *variable cost* (Z_{ce}) Saos :

$$\begin{aligned}
Z_{1:1} &= C + hP [(Q_{1:1} - Q_{1:1})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp. } 222.000)[(92-92)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

$$\begin{aligned}
Z_{1:2} &= C + hP [(Q_{1:2} - Q_{1:1}) + (Q_{1:2} - Q_{1:2})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp. } 222.000)[(92-92) + (225- 225)] \\
&= \text{Rp. } 567.890
\end{aligned}$$

$$\begin{aligned}
Z_{1:3} &= C + hP [(Q_{1:3} - Q_{1:1}) + (Q_{1:3} - Q_{1:2}) + (Q_{1:3} - Q_{1:3})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp. } 222.000)[(92-92) + (225- 225) + (385-385)] \\
&= \text{Rp. } 1.633.490
\end{aligned}$$

$$\begin{aligned}
Z_{1:4} &= C + hP [(Q_{1:4} - Q_{1:1}) + (Q_{1:4} - Q_{1:2}) + (Q_{1:4} - Q_{1:3}) + (Q_{1:4} - Q_{1:4})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp. } 222.000)[(624-92) + (624- 225) + (624-385) + \\
&\quad (624-624)] \\
&= \text{Rp. } 4.021.100
\end{aligned}$$

$$Z_{1:5} = C + hP [(Q_{1:5} - Q_{1:1}) + (Q_{1:5} - Q_{1:2}) + (Q_{1:5} - Q_{1:3}) + (Q_{1:5} - Q_{1:4})]$$

$$(Q_{1:5} - Q_{1:5})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(788-92) + (788-225) + (788-385) + (788-624) + (788-788)]$$

$$= \text{Rp. } 6.205.580$$

$$Z_{1:6} = C + hP [(Q_{1:6} - Q_{1:1}) + (Q_{1:6} - Q_{1:2}) + (Q_{1:6} - Q_{1:3}) + (Q_{1:6} - Q_{1:4}) + (Q_{1:6} - Q_{1:5}) + (Q_{1:6} - Q_{1:6})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(809-92) + (809-225) + (809-385) + (809-624) + (809-788) + (809-809)]$$

$$= \text{Rp. } 6.555.230$$

$$Z_{1:7} = C + hP [(Q_{1:7} - Q_{1:1}) + (Q_{1:7} - Q_{1:2}) + (Q_{1:7} - Q_{1:3}) + (Q_{1:7} - Q_{1:4}) + (Q_{1:7} - Q_{1:5}) + (Q_{1:7} - Q_{1:6}) + (Q_{1:7} - Q_{1:7})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(924-92) + (924-225) + (924-385) + (924-624) + (924-788) + (924-809) + (924-924)]$$

$$= \text{Rp. } 8.852.930$$

$$Z_{1:8} = C + hP [(Q_{1:8} - Q_{1:1}) + (Q_{1:8} - Q_{1:2}) + (Q_{1:8} - Q_{1:3}) + (Q_{1:8} - Q_{1:4}) + (Q_{1:8} - Q_{1:5}) + (Q_{1:8} - Q_{1:6}) + (Q_{1:8} - Q_{1:7}) + (Q_{1:8} - Q_{1:8})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1.138-92) + (1.138-225) + (1.138-385) + (1.138-624) + (1.138-788) + (1.138-809) + (1.138-924) + (1.138-1.138)]$$

$$= \text{Rp. } 13.841.270$$

$$Z_{1:9} = C + hP [(Q_{1:9} - Q_{1:1}) + (Q_{1:9} - Q_{1:2}) + (Q_{1:9} - Q_{1:3}) + (Q_{1:9} - Q_{1:4}) + (Q_{1:9} - Q_{1:5}) + (Q_{1:9} - Q_{1:6}) + (Q_{1:9} - Q_{1:7}) + (Q_{1:9} - Q_{1:8}) + (Q_{1:9} - Q_{1:9})]$$

$$Q_{1:9}]$$

$$\begin{aligned}
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1.280-92) + (1.280- 225) + (1.280- \\
&385) + (1.280-624) + (1.280- 788) + (1.280- 809) + (1.280- 924) + (1.280- \\
&1.138) + (1.280- 1.280)] \\
&= \text{Rp.}17.624.150
\end{aligned}$$

$$\begin{aligned}
Z_{1:10} &= C + hP [(Q_{1:10} - Q_{1:1}) + (Q_{1:10} - Q_{1:2}) + (Q_{1:10} - Q_{1:3}) + (Q_{1:10} - Q_{1:4}) \\
&\quad + (Q_{1:10} - Q_{1:5}) + (Q_{1:10} - Q_{1:6}) + (Q_{1:10} - Q_{1:7}) + (Q_{1:10} - Q_{1:8}) + \\
&\quad (Q_{1:10} - Q_{1:9}) + (Q_{1:10} - Q_{1:10})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1.344-92) + (1.344- 225) + (1.344- \\
&385) + (1.344-624) + (1.344- 788) + (1.344- 809) + (1.344- 924) + (1.344- \\
&1.138) + (1.344- 1.280) + (1.344 - 1.344)] \\
&= \text{Rp.}19.542.230
\end{aligned}$$

$$\begin{aligned}
Z_{1:11} &= C + hP [(Q_{1:11} - Q_{1:1}) + (Q_{1:11} - Q_{1:2}) + (Q_{1:11} - Q_{1:3}) + (Q_{1:11} - Q_{1:4}) \\
&\quad + (Q_{1:11} - Q_{1:5}) + (Q_{1:11} - Q_{1:6}) + (Q_{1:11} - Q_{1:7}) + (Q_{1:11} - Q_{1:8}) + \\
&\quad (Q_{1:11} - Q_{1:9}) + (Q_{1:11} - Q_{1:10}) + (Q_{1:11} - Q_{1:11})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(1.364-92) + (1.364- 225) + (1.364- \\
&385) + (1.364-624) + (1.364- 788) + (1.364- 809) + (1.364- 924) + (1.364- \\
&1.138) + (1.364- 1.280) + (1.364 - 1.344) + (1.364 - 1.364)] \\
&= \text{Rp.}20.208.230
\end{aligned}$$

$$\begin{aligned}
Z_{1:12} &= C + hP [(Q_{1:12} - Q_{1:1}) + (Q_{1:12} - Q_{1:2}) + (Q_{1:12} - Q_{1:3}) + (Q_{1:12} - Q_{1:4}) \\
&\quad + (Q_{1:12} - Q_{1:5}) + (Q_{1:12} - Q_{1:6}) + (Q_{1:12} - Q_{1:7}) + (Q_{1:12} - Q_{1:8}) + \\
&\quad (Q_{1:12} - Q_{1:9}) + (Q_{1:12} - Q_{1:10}) + (Q_{1:12} - Q_{1:11}) + (Q_{1:12} - Q_{1:12})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(1.533-92) + (1.533- 225) + (1.533- \\
&385) + (1.533-624) + (1.533- 788) + (1.533- 809) + (1.533- 924) + (1.533- \\
&1.138) + (1.533- 1.280) + (1.533 - 1.344) + (1.533 - 1.364) + (1.533 - 1.533)]
\end{aligned}$$

$$= \text{Rp.}26.398.700$$

$$Z_{2:2} = C + hP [(Q_{2:2} - Q_{2:2})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(131 - 131)]$$

$$= \text{Rp.}125.000$$

$$Z_{2:3} = C + hP [(Q_{2:3} - Q_{2:2}) + (Q_{2:3} - Q_{2:3})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(295 - 131)+ (295 - 295)]$$

$$= \text{Rp.}657.800$$

$$Z_{2:4} = C + hP [(Q_{2:4} - Q_{2:2}) + (Q_{2:4} - Q_{2:3}) + (Q_{2:4} - Q_{2:4})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(565 - 131)+ (565 - 295) + (565 - 565)]$$

$$= \text{Rp.}2.249.540$$

$$Z_{2:5} = C + hP [(Q_{2:5} - Q_{2:2}) + (Q_{2:5} - Q_{2:3}) + (Q_{2:5} - Q_{2:4}) + (Q_{2:5} - Q_{2:5})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(754 - 131)+ (754 - 295) + (754 - 565)$$

$$+ (754 - 754)]$$

$$= \text{Rp.}3.887.900$$

$$Z_{2:6} = C + hP [(Q_{2:6} - Q_{2:2}) + (Q_{2:6} - Q_{2:3}) + (Q_{2:6} - Q_{2:4}) + (Q_{2:6} - Q_{2:5})$$

$$+ (Q_{2:6} - Q_{2:6})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(818 - 131)+ (818 - 295) + (818 - 565)$$

$$+ (818 - 754) + (818 - 818)]$$

$$= \text{Rp.}4.167.620$$

$$Z_{2:7} = C + hP [(Q_{2:7} - Q_{2:2}) + (Q_{2:7} - Q_{2:3}) + (Q_{2:7} - Q_{2:4}) + (Q_{2:7} - Q_{2:5})$$

$$+ (Q_{2:7} - Q_{2:6}) + (Q_{2:7} - Q_{2:7})]$$

$$= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(840 - 131)+ (840 - 295) + (840 - 565)$$

$$+ (840 - 754) + (840 - 818) + (840 - 840)]$$

$$= \text{Rp.}6.082.370$$

$$\begin{aligned}
Z_{2:8} &= C + hP [(Q_{2:8} - Q_{2:2}) + (Q_{2:8} - Q_{2:3}) + (Q_{2:8} - Q_{2:4}) + (Q_{2:8} - Q_{2:5}) + \\
&\quad (Q_{2:8} - Q_{2:6}) + (Q_{2:8} - Q_{2:7}) + (Q_{2:8} - Q_{2:8})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(860 - 131) + (860 - 295) + (860 - 565) \\
&\quad + (860 - 754) + (860 - 818) + (860 - 840) + (860 - 860)] \\
&= \text{Rp. } 10.358.090
\end{aligned}$$

$$\begin{aligned}
Z_{2:9} &= C + hP [(Q_{2:9} - Q_{2:2}) + (Q_{2:9} - Q_{2:3}) + (Q_{2:9} - Q_{2:4}) + (Q_{2:9} - Q_{2:5}) + \\
&\quad (Q_{2:9} - Q_{2:6}) + (Q_{2:9} - Q_{2:7}) + (Q_{2:9} - Q_{2:8}) + (Q_{2:9} - Q_{2:9})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(952 - 131) + (952 - 295) + (952 - 565) \\
&\quad + (952 - 754) + (952 - 818) + (952 - 840) + (952 - 860) + (952 - 952)] \\
&= \text{Rp. } 13.668.110
\end{aligned}$$

$$\begin{aligned}
Z_{2:10} &= C + hP [(Q_{2:10} - Q_{2:2}) + (Q_{2:10} - Q_{2:3}) + (Q_{2:10} - Q_{2:4}) + (Q_{2:10} - \\
&\quad Q_{2:5}) + (Q_{2:10} - Q_{2:6}) + (Q_{2:10} - Q_{2:7}) + (Q_{2:10} - Q_{2:8}) + (Q_{2:10} - \\
&\quad Q_{2:9}) + (Q_{2:10} - Q_{2:10})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1085 - 131) + (1085 - 295) + (1085 - \\
&\quad 565) + (1085 - 754) + (1085 - 818) + (1085 - 840) + (1085 - 860) + (1085 - \\
&\quad 952) + (1085 - 1085)] \\
&= \text{Rp. } 15.373.070
\end{aligned}$$

$$\begin{aligned}
Z_{2:11} &= C + hP [(Q_{2:11} - Q_{2:2}) + (Q_{2:11} - Q_{2:3}) + (Q_{2:11} - Q_{2:4}) + (Q_{2:11} - \\
&\quad Q_{2:5}) + (Q_{2:11} - Q_{2:6}) + (Q_{2:11} - Q_{2:7}) + (Q_{2:11} - Q_{2:8}) + (Q_{2:11} - \\
&\quad Q_{2:9}) + (Q_{2:11} - Q_{2:10}) + (Q_{2:11} - Q_{2:11})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1245 - 131) + (1245 - 295) + (1245 - \\
&\quad 565) + (1245 - 754) + (1245 - 818) + (1245 - 840) + (1245 - 860) + (1245 - \\
&\quad 952) + (1245 - 1085) + (1245 - 1245)]
\end{aligned}$$

$$= \text{Rp.}15.972.470$$

$$\begin{aligned} Z_{2:12} &= C + hP [(Q_{2:12} - Q_{2:2}) + (Q_{2:12} - Q_{2:3}) + (Q_{2:12} - Q_{2:4}) + (Q_{2:12} - \\ &\quad Q_{2:5}) + (Q_{2:12} - Q_{2:6}) + (Q_{2:12} - Q_{2:7}) + (Q_{2:12} - Q_{2:8}) + (Q_{2:12} - \\ &\quad Q_{2:9}) + (Q_{2:12} - Q_{2:10}) + (Q_{2:12} - Q_{2:11}) + (Q_{2:12} - Q_{2:12})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(1484 - 131) + (1484 - 295) + (1484 \\ &\quad - 565) + (1484 - 754) + (1484 - 818) + (1484 - 840) + (1484 - 860) + (1484 \\ &\quad - 952) + (1484 - 1085) + (1484 - 1245) + (1484 - 1484)] \\ &= \text{Rp.}21.600.170 \end{aligned}$$

$$\begin{aligned} Z_{3:3} &= C + hP [(Q_{3:3} - Q_{3:3})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(164 - 164)] \\ &= \text{Rp.} 125.000 \end{aligned}$$

$$\begin{aligned} Z_{3:4} &= C + hP [(Q_{3:4} - Q_{3:3}) + (Q_{3:4} - Q_{3:4})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(434 - 164) + (434 - 434)] \\ &= \text{Rp.}920.870 \end{aligned}$$

$$\begin{aligned} Z_{3:5} &= C + hP [(Q_{3:5} - Q_{3:3}) + (Q_{3:5} - Q_{3:4}) + (Q_{3:5} - Q_{3:5})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(623 - 164) + (623 - 434) + (623 - \\ &\quad 623)] \\ &= \text{Rp.}2.013.110 \end{aligned}$$

$$\begin{aligned} Z_{3:6} &= C + hP [(Q_{3:6} - Q_{3:3}) + (Q_{3:6} - Q_{3:4}) + (Q_{3:6} - Q_{3:5}) + (Q_{3:6} - Q_{3:6})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(687 - 164) + (687 - 434) + (687 - 623) \\ &\quad + (687 - 687)] \\ &= \text{Rp.}2.222.900 \end{aligned}$$

$$\begin{aligned} Z_{3:7} &= C + hP [(Q_{3:7} - Q_{3:3}) + (Q_{3:7} - Q_{3:4}) + (Q_{3:7} - Q_{3:5}) + (Q_{3:7} - Q_{3:6}) + \\ &\quad (Q_{3:7} - Q_{3:7})] \end{aligned}$$

$$\begin{aligned}
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(709 - 164) + (709 - 434) + (709 - 623) \\
&+ (709 - 687) + (709 - 709)] \\
&= \text{Rp. } 3.754.700
\end{aligned}$$

$$\begin{aligned}
Z_{3:8} &= C + hP [(Q_{3:8} - Q_{3:3}) + (Q_{3:8} - Q_{3:4}) + (Q_{3:8} - Q_{3:5}) + (Q_{3:8} - Q_{3:6}) + \\
&\quad (Q_{3:8} - Q_{3:7}) + (Q_{3:8} - Q_{3:8})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(729 - 164) + (729 - 434) + (729 - 623) \\
&+ (729 - 687) + (729 - 709) + (729 - 729)] \\
&= \text{Rp. } 7.317.800
\end{aligned}$$

$$\begin{aligned}
Z_{3:9} &= C + hP [(Q_{3:9} - Q_{3:3}) + (Q_{3:9} - Q_{3:4}) + (Q_{3:9} - Q_{3:5}) + (Q_{3:9} - Q_{3:6}) + \\
&\quad (Q_{3:9} - Q_{3:7}) + (Q_{3:9} - Q_{3:8}) + (Q_{3:9} - Q_{3:9})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(821 - 164) + (821 - 434) + (821 - 623) \\
&+ (821 - 687) + (821 - 709) + (821 - 729) + (821 - 821)] \\
&= \text{Rp. } 10.154.960
\end{aligned}$$

$$\begin{aligned}
Z_{3:10} &= C + hP [(Q_{3:10} - Q_{3:3}) + (Q_{3:10} - Q_{3:4}) + (Q_{3:10} - Q_{3:5}) + (Q_{3:10} - Q_{3:6}) + \\
&\quad (Q_{3:10} - Q_{3:7}) + (Q_{3:10} - Q_{3:8}) + (Q_{3:10} - Q_{3:9}) + (Q_{3:10} - Q_{3:10})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(954 - 164) + (954 - 434) + (954 - 623) \\
&+ (954 - 687) + (954 - 709) + (954 - 729) + (954 - 821) + (954 - 954)] \\
&= \text{Rp. } 11.646.800
\end{aligned}$$

$$\begin{aligned}
Z_{3:11} &= C + hP [(Q_{3:11} - Q_{3:3}) + (Q_{3:11} - Q_{3:4}) + (Q_{3:11} - Q_{3:5}) + (Q_{3:11} - Q_{3:6}) + \\
&\quad (Q_{3:11} - Q_{3:7}) + (Q_{3:11} - Q_{3:8}) + (Q_{3:11} - Q_{3:9}) + (Q_{3:11} - Q_{3:10}) + (Q_{3:11} - \\
&\quad Q_{3:11})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(1114 - 164) + (1114 - 434) + (1114 - \\
&623) + (1114 - 687) + (1114 - 709) + (1114 - 729) + (1114 - 821) + (1114 - \\
&954) + (1114 - 1114)]
\end{aligned}$$

$$= \text{Rp.}12.179.600$$

$$\begin{aligned} Z_{3:12} &= C + hP [(Q_{3:12} - Q_{3:3}) + (Q_{3:12} - Q_{3:4}) + (Q_{3:12} - Q_{3:5}) + (Q_{3:12} - Q_{3:6}) \\ &\quad + (Q_{3:12} - Q_{3:7}) + (Q_{3:12} - Q_{3:8}) + (Q_{3:12} - Q_{3:9}) + (Q_{3:12} - Q_{3:10}) \\ &\quad + (Q_{3:12} - Q_{3:11}) + (Q_{3:12} - Q_{3:12})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000)[(1353 - 164) + (1353 - 434) + (1353 - \\ &\quad 623) + (1353 - 687) + (1353 - 709) + (1353 - 729) + (1353 - 821) + (1353 - \\ &\quad 954) + (1353 - 1114) + (1353 - 1353)] \\ &= \text{Rp.}17.244.530 \end{aligned}$$

$$\begin{aligned} Z_{4:4} &= C + hP [(Q_{4:4} - Q_{4:4})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000) [(270 - 270)] \\ &= \text{Rp.} 125.000 \end{aligned}$$

$$\begin{aligned} Z_{4:5} &= C + hP [(Q_{4:5} - Q_{4:4}) + (Q_{4:5} - Q_{4:5})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000) [(459 - 270) + (459 - 459)] \\ &= \text{Rp.}671.120 \end{aligned}$$

$$\begin{aligned} Z_{4:6} &= C + hP [(Q_{4:6} - Q_{4:4}) + (Q_{4:6} - Q_{4:5}) + (Q_{4:6} - Q_{4:6})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000) [(523 - 270) + (523 - 459) + (523 - 523)] \\ &= \text{Rp.}810.980 \end{aligned}$$

$$\begin{aligned} Z_{4:7} &= C + hP [(Q_{4:7} - Q_{4:4}) + (Q_{4:7} - Q_{4:5}) + (Q_{4:7} - Q_{4:6}) + (Q_{4:7} - Q_{4:7})] \\ &= \text{Rp.} 125.000 + (0.015 \times \text{Rp.} 222.000) [(545 - 270) + (545 - 459) + (545 - 523) + \\ &\quad (545 - 545)] \\ &= \text{Rp.}1.959.830 \end{aligned}$$

$$\begin{aligned} Z_{4:8} &= C + hP [(Q_{4:8} - Q_{4:4}) + (Q_{4:8} - Q_{4:5}) + (Q_{4:8} - Q_{4:6}) + (Q_{4:8} - \\ &\quad Q_{4:7}) + (Q_{4:8} - Q_{4:8})] \end{aligned}$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(565-270)+(565-459)+(565-523)+ \\ (565-545) + (565-565)]$$

$$= \text{Rp.}4.810.310$$

$$Z_{4:9} = C + hP [(Q_{4:9} - Q_{4:4}) + (Q_{4:9} - Q_{4:5}) + (Q_{4:9} - Q_{4:6}) + (Q_{4:9} - \\ Q_{4:7}) + (Q_{4:9} - Q_{4:8}) + (Q_{4:9} - Q_{4:9})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(657-270)+(657-459)+(657-523)+ \\ (657-545) + (657-565) + (657-657)]$$

$$= \text{Rp.}7.174.610$$

$$Z_{4:10} = C + hP [(Q_{4:10} - Q_{4:4}) + (Q_{4:10} - Q_{4:5}) + (Q_{4:10} - Q_{4:6}) + (Q_{4:10} - \\ Q_{4:7}) + (Q_{4:10} - Q_{4:8}) + (Q_{4:10} - Q_{4:9}) + (Q_{4:10} - Q_{4:10})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(790-270)+(790-459)+(790-523)+ \\ (790-545) + (790-565) + (790-657) + (790-790)]$$

$$= \text{Rp.}8.453.330$$

$$Z_{4:11} = C + hP [(Q_{4:11} - Q_{4:4}) + (Q_{4:11} - Q_{4:5}) + (Q_{4:11} - Q_{4:6}) + (Q_{4:11} - \\ Q_{4:7}) + (Q_{4:11} - Q_{4:8}) + (Q_{4:11} - Q_{4:9}) + (Q_{4:11} - Q_{4:10}) + (Q_{4:11} - \\ Q_{4:11})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(950-270)+(950-459)+(950-523)+ \\ (950-545) + (950-565) + (950-657) + (950-790) + (950-950)]$$

$$= \text{Rp.}8.919.530$$

$$Z_{4:12} = C + hP [(Q_{4:12} - Q_{4:4}) + (Q_{4:12} - Q_{4:5}) + (Q_{4:12} - Q_{4:6}) + \\ (Q_{4:12} - Q_{4:7}) + (Q_{4:12} - Q_{4:8}) + (Q_{4:12} - Q_{4:9}) + (Q_{4:12} - Q_{4:10}) + \\ (Q_{4:12} - Q_{4:11}) + (Q_{4:12} - Q_{4:12})]$$

$$\begin{aligned}
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000) [(1189-270)+(1189-459)+(1189-523)+ (1189-545) + (1189-565) + (1189-657) + (1189-790) + (1189-950) \\
&\quad + (1189-1189)] \\
&= \text{Rp. } 13.421.690
\end{aligned}$$

$$\begin{aligned}
Z_{5:5} &= C + hP [(Q_{5:5} - Q_{5:5})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(189-189)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

$$\begin{aligned}
Z_{5:6} &= C + hP [(Q_{5:6} - Q_{5:5}) + (Q_{5:6} - Q_{5:6})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(253-189) + (253-253)] \\
&= \text{Rp. } 194.930
\end{aligned}$$

$$\begin{aligned}
Z_{5:7} &= C + hP [(Q_{5:7} - Q_{5:5}) + (Q_{5:7} - Q_{5:6}) + (Q_{5:7} - Q_{5:7})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(275-189)+(275-253)+(275-275)] \\
&= \text{Rp. } 960.830
\end{aligned}$$

$$\begin{aligned}
Z_{5:8} &= C + hP [(Q_{5:8} - Q_{5:5}) + (Q_{5:8} - Q_{5:6}) + (Q_{5:8} - Q_{5:7}) + (Q_{5:8} - Q_{5:8})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(295-189)+(295-253)+(295-275)+ \\
&\quad (295-295)] \\
&= \text{Rp. } 3.098.690
\end{aligned}$$

$$\begin{aligned}
Z_{5:9} &= C + hP [(Q_{5:9} - Q_{5:5}) + (Q_{5:9} - Q_{5:6}) + (Q_{5:9} - Q_{5:7}) + (Q_{5:9} - Q_{5:8}) + \\
&\quad (Q_{5:9} - Q_{5:9})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(387-189)+(387-253)+(387-275)+ \\
&\quad (387-295) + (387-387)] \\
&= \text{Rp. } 4.990.130
\end{aligned}$$

$$\begin{aligned}
Z_{5:10} &= C + hP [(Q_{5:10} - Q_{5:5}) + (Q_{5:10} - Q_{5:6}) + (Q_{5:10} - Q_{5:7}) + (Q_{5:10} - Q_{5:8}) + \\
&\quad (Q_{5:10} - Q_{5:9}) + (Q_{5:10} - Q_{5:10})]
\end{aligned}$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(520-189)+(520-253)+(520-275)+ \\ (520-295) + (520-387) + (520-520)]$$

$$= \text{Rp. } 6.055.730$$

$$Z_{5:11} = C + hP [(Q_{5:11} - Q_{5:5}) + (Q_{5:11} - Q_{5:6}) + (Q_{5:11} - Q_{5:7}) + (Q_{5:11} - Q_{5:8}) + \\ (Q_{5:11} - Q_{5:9}) + (Q_{5:11} - Q_{5:10}) + (Q_{5:11} - Q_{5:11})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(680-189)+(680-253)+(680-275)+ \\ (680-295) + (680-387) + (680-520) + (680-680)]$$

$$= \text{Rp. } 6.455.330$$

$$Z_{5:12} = C + hP [(Q_{5:12} - Q_{5:5}) + (Q_{5:12} - Q_{5:6}) + (Q_{5:12} - Q_{5:7}) + (Q_{5:12} - Q_{5:8}) + \\ (Q_{5:12} - Q_{5:9}) + (Q_{5:12} - Q_{5:10}) + (Q_{5:12} - Q_{5:11}) + (Q_{5:12} - Q_{5:12})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(919-189)+(919-253)+(919-275)+ \\ (919-295) + (919-387) + (919-520) + (919-680) + (919-919)]$$

$$= \text{Rp. } 10.394.720$$

$$Z_{6:6} = C + hP [(Q_{6:6} - Q_{6:6})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(64-64)]$$

$$= \text{Rp. } 125.000$$

$$Z_{6:7} = C + hP [(Q_{6:7} - Q_{6:6}) + (Q_{6:7} - Q_{6:7})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(86-64) + (86-86)]$$

$$= \text{Rp. } 507.950$$

$$Z_{6:8} = C + hP [(Q_{6:8} - Q_{6:6}) + (Q_{6:8} - Q_{6:7}) + (Q_{6:8} - Q_{6:8})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(106-64) + (106-86) + (106-106)]$$

$$= \text{Rp. } 1.933.190$$

$$Z_{6:9} = C + hP [(Q_{6:9} - Q_{6:6}) + (Q_{6:9} - Q_{6:7}) + (Q_{6:9} - Q_{6:8}) + (Q_{6:9} - Q_{6:9})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(198-64) + (198-86) + (198-106) + (198-198)]$$

$$= \text{Rp. } 3.351.770$$

$$Z_{6:10} = C + hP [(Q_{6:10} - Q_{6:6}) + (Q_{6:10} - Q_{6:7}) + (Q_{6:10} - Q_{6:8}) + (Q_{6:10} - Q_{6:9}) + (Q_{6:10} - Q_{6:10})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(331-64) + (331-86) + (331-106) + (331-198) + (331-331)]$$

$$= \text{Rp. } 4.204.250$$

$$Z_{6:11} = C + hP [(Q_{6:11} - Q_{6:6}) + (Q_{6:11} - Q_{6:7}) + (Q_{6:11} - Q_{6:8}) + (Q_{6:11} - Q_{6:9}) + (Q_{6:11} - Q_{6:10}) + (Q_{6:11} - Q_{6:11})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(491-64) + (491-86) + (491-106) + (491-198) + (491-331) + (491-491)]$$

$$= \text{Rp. } 4.537.250$$

$$Z_{6:12} = C + hP [(Q_{6:12} - Q_{6:6}) + (Q_{6:12} - Q_{6:7}) + (Q_{6:12} - Q_{6:8}) + (Q_{6:12} - Q_{6:9}) + (Q_{6:12} - Q_{6:10}) + (Q_{6:12} - Q_{6:11}) + (Q_{6:12} - Q_{6:12})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(730-64) + (730-86) + (730-106) + (730-198) + (730-331) + (730-491) + (730-730)]$$

$$= \text{Rp. } 7.913.870$$

$$Z_{7:7} = C + hP [(Q_{7:7} - Q_{7:7})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(22-22)]$$

$$= \text{Rp. } 125.000$$

$$Z_{7:8} = C + hP [(Q_{7:8} - Q_{7:7}) + (Q_{7:8} - Q_{7:8})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(42-22) + (42-42)]$$

$$= \text{Rp. } 837.620$$

$$\begin{aligned}
Z_{7:9} &= C + hP [(Q_{7:9} - Q_{7:7}) + (Q_{7:9} - Q_{7:8}) + (Q_{7:9} - Q_{7:9})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(134-22) + (134-42) + (134-134)] \\
&= \text{Rp. } 1.783.340
\end{aligned}$$

$$\begin{aligned}
Z_{7:10} &= C + hP [(Q_{7:10} - Q_{7:7}) + (Q_{7:10} - Q_{7:8}) + (Q_{7:10} - Q_{7:9}) + (Q_{7:10} - Q_{7:10})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(267-22) + (267-42) + (267-134) + \\
&\quad (267-267)] \\
&= \text{Rp. } 2.422.700
\end{aligned}$$

$$\begin{aligned}
Z_{7:11} &= C + hP [(Q_{7:11} - Q_{7:7}) + (Q_{7:11} - Q_{7:8}) + (Q_{7:11} - Q_{7:9}) + (Q_{7:11} - \\
&\quad Q_{7:10}) + (Q_{7:11} - Q_{7:11})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(427-22) + (427-42) + (427-134) + \\
&\quad (427-267) + (427-427)] \\
&= \text{Rp. } 2.689.100
\end{aligned}$$

$$\begin{aligned}
Z_{7:12} &= C + hP [(Q_{7:12} - Q_{7:7}) + (Q_{7:12} - Q_{7:8}) + (Q_{7:12} - Q_{7:9}) + (Q_{7:12} - \\
&\quad Q_{7:10}) + (Q_{7:12} - Q_{7:11}) + (Q_{7:12} - Q_{7:12})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(666-22) + (666-42) + (666-134) + \\
&\quad (666-267) + (666-427) + (666-666)] \\
&= \text{Rp. } 5.502.950
\end{aligned}$$

$$\begin{aligned}
Z_{8:8} &= C + hP [(Q_{8:8} - Q_{8:8})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(20-20)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

$$\begin{aligned}
Z_{8:9} &= C + hP [(Q_{8:9} - Q_{8:8}) + (Q_{8:9} - Q_{8:9})] \\
&= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(112-20) + (112-112)] \\
&= \text{Rp. } 597.860
\end{aligned}$$

$$Z_{8:10} = C + hP [(Q_{8:10} - Q_{8:8}) + (Q_{8:10} - Q_{8:9}) + (Q_{8:10} - Q_{8:10})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(245-20) + (245-112) + (245-245)]$$

$$= \text{Rp. } 1.024.100$$

$$Z_{8:11} = C + hP [(Q_{8:11} - Q_{8:8}) + (Q_{8:11} - Q_{8:9}) + (Q_{8:11} - Q_{8:10}) + (Q_{8:11} - Q_{8:11})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(405-20) + (405-112) + (405-245) + (405-405)]$$

$$= \text{Rp. } 1.223.900$$

$$Z_{8:12} = C + hP [(Q_{8:12} - Q_{8:8}) + (Q_{8:12} - Q_{8:9}) + (Q_{8:12} - Q_{8:10}) + (Q_{8:12} - Q_{8:11}) + (Q_{8:12} - Q_{8:12})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(644-20) + (644-112) + (644-245) + (644-405) + (644-644)]$$

$$= \text{Rp. } 3.474.980$$

$$Z_{9:9} = C + hP [(Q_{9:9} - Q_{9:9})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(92-92)]$$

$$= \text{Rp. } 125.000$$

$$Z_{9:10} = C + hP [(Q_{9:10} - Q_{9:9}) + (Q_{9:10} - Q_{9:10})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(225-92) + (225-225)]$$

$$= \text{Rp. } 338.120$$

$$Z_{9:11} = C + hP [(Q_{9:11} - Q_{9:9}) + (Q_{9:11} - Q_{9:10}) + (Q_{9:11} - Q_{9:11})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(385-92) + (385-225) + (385-385)]$$

$$= \text{Rp. } 471.320$$

$$Z_{9:12} = C + hP [(Q_{9:12} - Q_{9:9}) + (Q_{9:12} - Q_{9:10}) + (Q_{9:12} - Q_{9:11}) + (Q_{9:12} - Q_{9:12})]$$

$$= \text{Rp. } 125.000 + (0.015 \times \text{Rp. } 222.000)[(624-92) + (624-225) + (624-385) + (624-624)]$$

$$= \text{Rp. } 2.159.630$$

$$\begin{aligned}
Z_{10:10} &= C + hP [(Q_{10:10} - Q_{10:10})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(133-133)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

$$\begin{aligned}
Z_{10:11} &= C + hP [(Q_{10:11} - Q_{10:10}) + (Q_{10:11} - Q_{10:11})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(293-133) + (293-293)] \\
&= \text{Rp.}191.600
\end{aligned}$$

$$\begin{aligned}
Z_{10:12} &= C + hP [(Q_{10:12} - Q_{10:10}) + (Q_{10:12} - Q_{10:11}) + (Q_{10:12} - Q_{10:12})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(532-133) + (532-293) + (532-532)] \\
&= \text{Rp.}1.317.140
\end{aligned}$$

$$\begin{aligned}
Z_{11:11} &= C + hP [(Q_{11:11} - Q_{11:11})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(160-160)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

$$\begin{aligned}
Z_{11:12} &= C + hP [(Q_{11:12} - Q_{11:11}) + (Q_{11:12} - Q_{11:12})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(399-160) + (399-399)] \\
&= \text{Rp.}687.770
\end{aligned}$$

$$\begin{aligned}
Z_{12:12} &= C + hP [(Q_{12:12} - Q_{12:12})] \\
&= \text{Rp. } 125.000 + (0,015 \times \text{Rp.}222.000) [(239-239)] \\
&= \text{Rp. } 125.000
\end{aligned}$$

LAMPIRAN 4

- kumulatif *variable cost* minimum (f_e) Tembakau :

$$f_0 = 0$$

$$f_1 = \text{Min} (Z_{1:1} + f_0)$$

$$= \text{Min} (\text{Rp. } 625.000 + \text{Rp. } 0)$$

$$= \text{Rp. } 625.000 \text{ untuk } Z_{1:1} + f_0$$

$$f_2 = \text{Min} (Z_{1:2} + f_0; Z_{2:2} + f_1)$$

$$= \text{Min} (\text{Rp. } 4.465.000 + \text{Rp. } 0; \text{Rp. } 625.000 + \text{Rp. } 625.000)$$

$$= \text{Rp. } 1.250.000 \text{ untuk } Z_{2:2} + f_1$$

$$f_3 = \text{Min} (Z_{1:3} + f_0; Z_{2:3} + f_1; Z_{3:3} + f_2)$$

$$= \text{Min} (\text{Rp. } 13.715.500 + \text{Rp. } 0; \text{Rp. } 5.250.250 + \text{Rp. } 625.000; \text{Rp. } 625.000 + \text{Rp. } 1.250.000)$$

$$= \text{Rp. } 1.875.000 \text{ untuk } Z_{3:3} + f_2$$

$$f_4 = \text{Min} (Z_{1:4} + f_0; Z_{2:4} + f_1; Z_{3:4} + f_2; Z_{4:4} + f_3)$$

$$= \text{Min} (\text{Rp. } 34.397.500 + \text{Rp. } 0; \text{Rp. } 19.038.250 + \text{Rp. } 625.000; \text{Rp. } 7.519.000 + \text{Rp. } 1.250.000; \text{Rp. } 625.000 + \text{Rp. } 1.875.000)$$

$$= \text{Rp. } 2.500.000 \text{ untuk } Z_{4:4} + f_3$$

$$f_5 = \text{Min} (Z_{1:5} + f_0; Z_{2:5} + f_1; Z_{3:5} + f_2; Z_{4:5} + f_3; Z_{5:5} + f_4)$$

$$= \text{Min} (\text{Rp. } 53.273.500 + \text{Rp. } 0; \text{Rp. } 33.195.250 + \text{Rp. } 625.000; \text{Rp. } 16.957.000 + \text{Rp. } 1.250.000; \text{Rp. } 5.344.000 + 1.875.000; \text{Rp. } 625.000.000 + 2.500.000)$$

$$= \text{Rp. } 3.125.000 \text{ untuk } Z_{5:5} + f_4$$

$$\begin{aligned}
f_6 &= \text{Min} (Z_{1:6} + f_0 ; Z_{2:6} + f_1 ; Z_{3:6} + f_2 ; Z_{4:6} + f_3 ; Z_{5:6} + f_4 ; Z_{6:6} + f_5) \\
&= \text{Min} (\text{Rp.}56.296.000 + \text{Rp.} 0 ; \text{Rp.}35.613.250 + \text{Rp.} 625.000 ; \text{Rp.}18.770.500 \\
&\quad + \text{Rp.} 1.250.000 ; \text{Rp.}6.553.000 + 1.875.000 ; \text{Rp.}1.229.500 + 2.500.000 ; \\
&\quad \text{Rp.} 625.000 + 3.125.000) \\
&= \text{Rp.} 3.729.500 \text{ untuk } Z_{5:6} + f_4
\end{aligned}$$

$$\begin{aligned}
f_7 &= \text{Min} (Z_{1:7} + f_0 ; Z_{2:7} + f_1 ; Z_{3:7} + f_2 ; Z_{4:7} + f_3 ; Z_{5:7} + f_4 ; Z_{6:7} + \\
&\quad f_5 ; Z_{7:7} + f_6) \\
&= \text{Min} (\text{Rp.}76.190.500 + \text{Rp.} 0 ; \text{Rp.}52.192.000 + \text{Rp.} 625.000 ; \text{Rp.}32.033.500 \\
&\quad + \text{Rp.} 1.250.000 ; \text{Rp.}16.500.250 + 1.875.000 ; \text{Rp.}7.861.000 + \text{Rp.} 2.500.000 ; \\
&\quad \text{Rp.}3.940.750 + 3.125.000 ; \text{Rp.} 625.000 + \text{Rp.} 3.729.500) \\
&= \text{Rp.} 4.354.500 \text{ untuk } Z_{7:7} + f_6
\end{aligned}$$

$$\begin{aligned}
f_8 &= \text{Min} (Z_{1:8} + f_0 ; Z_{2:8} + f_1 ; Z_{3:8} + f_2 ; Z_{4:8} + f_3 ; Z_{5:8} + f_4 ; Z_{6:8} + \\
&\quad f_5 ; Z_{7:8} + f_6 ; Z_{8:8} + f_7) \\
&= \text{Min} (\text{Rp.}119.445.250 + \text{Rp.} 0 ; \text{Rp.}89.267.500 + \text{Rp.} 625.000 ; \text{Rp.}62.929.750 \\
&\quad + \text{Rp.}1.250.000 ; \text{Rp.}41.217.250 + \text{Rp.}1.875.000 ; \text{Rp.}26.398.750 + \text{Rp.} \\
&\quad 2.500.000 ; \text{Rp.}16.299.250 + \text{Rp.} 3.125.000 ; \text{Rp.}6.804.250 + \text{Rp.} 3.729.500 ; \\
&\quad \text{Rp.}625.000 + \text{Rp.} 4.354.500) \\
&= \text{Rp.} 4.979.500 \text{ untuk } Z_{8:8} + f_7
\end{aligned}$$

$$\begin{aligned}
f_9 &= \text{Min} (Z_{1:9} + f_0 ; Z_{2:9} + f_1 ; Z_{3:9} + f_2 ; Z_{4:9} + f_3 ; Z_{5:9} + f_4 ; Z_{6:9} + \\
&\quad f_5 ; Z_{7:9} + f_6 ; Z_{8:9} + f_7 ; Z_{9:9} + f_8) \\
&= \text{Min} (\text{Rp.}152.265.250 + \text{Rp.} 0 ; \text{Rp.}117.985.000 + \text{Rp.} 625.000 ; \text{Rp.}87.544.750 \\
&\quad + \text{Rp.}1.250.000 ; \text{Rp.}61.729.750 + \text{Rp.}1.875.000 ; \text{Rp.}42.808.750 + \text{Rp.} 2.500.000
\end{aligned}$$

$$\begin{aligned}
& ; \text{Rp.}28.606.750 + \text{Rp. } 3.125.000 ; \text{Rp.}15.009.250 + \text{Rp. } 3.729.500 ; \\
& \text{Rp.}4.727.500 + \text{Rp. } 4.354.500 ; \text{Rp. } 625.000 + \text{Rp. } 4.979.500) \\
& = \text{Rp. } 5.604.500 \text{ untuk } Z_{9:9} + f_8
\end{aligned}$$

$$\begin{aligned}
f_{10} &= \text{Min} (Z_{1:10} + f_0 ; Z_{2:10} + f_1 ; Z_{3:10} + f_2 ; Z_{4:10} + f_3 ; Z_{5:10} + f_4 ; Z_{6:10} + \\
& f_5 ; Z_{7:10} + f_6 ; Z_{8:10} + f_7 ; Z_{9:10} + f_8 ; Z_{10:10} + f_9) \\
& = \text{Min} (\text{Rp.}168.802.750 + \text{Rp.}0 ; \text{Rp.}132.685.000 + \text{Rp. } 625.000 ; \\
& \text{Rp.}100.407.250 + \text{Rp.}1.250.000 ; \text{Rp.}72.754.750 + \text{Rp.}1.875.000; \\
& \text{Rp.}51.996.250 + \text{Rp. } 2.500.000 ; \text{Rp.}35.956.750 + \text{Rp.}3.125.000 ; \\
& \text{Rp.}20.521.750 + \text{Rp. } 3.729.500 ; \text{Rp.}8.402.500 + \text{Rp. } 4.354.500 ; \text{Rp.}2.462.500 \\
& + \text{Rp. } 4.979.500 ; \text{Rp. } 625.000 + \text{Rp. } 5.604.500) \\
& = \text{Rp.}6.229.500 \text{ untuk } Z_{10:10} + f_9
\end{aligned}$$

$$\begin{aligned}
f_{11} &= \text{Min} (Z_{1:11} + f_0 ; Z_{2:11} + f_1 ; Z_{3:11} + f_2 ; Z_{4:11} + f_3 ; Z_{5:11} + f_4 ; Z_{6:11} + \\
& f_5 ; Z_{7:11} + f_6 ; Z_{8:11} + f_7 ; Z_{9:11} + f_8 ; Z_{10:11} + f_9 ; Z_{11:11} + f_{10}) \\
& = \text{Min} (\text{Rp.}174.637.750 + \text{Rp.}0 ; \text{Rp.}137.936.500 + \text{Rp.}625.000 ; \text{Rp.}105.075.250 \\
& + \text{Rp.}1.250.000 ; \text{Rp.}76.839.250 + \text{Rp.}1.875.000 ; \text{Rp.}55.497.250 + \text{Rp.} \\
& 2.500.000 ; \text{Rp.}38.874.250 + \text{Rp. } 3.125.000 ; \text{Rp.}22.855.750 + \text{Rp. } 3.729.500 ; \\
& \text{Rp.}10.153.000 + \text{Rp. } 4.354.500 ; \text{Rp.}3.629.500 + \text{Rp. } 4.979.500 ; \text{Rp.}1.208.500 \\
& + \text{Rp. } 5.604.500 ; \text{Rp.}625.000 + \text{Rp.}6.229.500) \\
& = \text{Rp. } 6.813.000 \text{ untuk } Z_{10:11} + f_9
\end{aligned}$$

$$\begin{aligned}
f_{12} &= \text{Min} (Z_{1:12} + f_0 ; Z_{2:12} + f_1 ; Z_{3:12} + f_2 ; Z_{4:12} + f_3 ; Z_{5:12} + f_4 ; Z_{6:12} + \\
& f_5 ; Z_{7:12} + f_6 ; Z_{8:12} + f_7 ; Z_{9:12} + f_8 ; Z_{10:12} + f_9 ; Z_{11:12} + \\
& f_{10} ; Z_{12:12} + f_{11})
\end{aligned}$$

$$\begin{aligned}
&= \text{Min} (\text{Rp.}228.304.000 + \text{Rp.}0 ; \text{Rp.}186.724.000 + \text{Rp.}625.000 ; \text{Rp.}148.984.000 \\
&+ \text{Rp.}1.250.000 ; \text{Rp.}115.869.250 + \text{Rp.}1.875.000 ; \text{Rp.}89.648.500 + \text{Rp.} \\
&2.500.000 ; \text{Rp.}68.146.750 + \text{Rp.} 3.125.000 ; \text{Rp.}47.249.500 + \text{Rp.} 3.729.500 ; \\
&\text{Rp.}29.668.000 + \text{Rp.} 4.354.500 ; \text{Rp.}18.265.750 + \text{Rp.} 4.979.500 ; \\
&\text{Rp.}10.966.000 + \text{Rp.} 5.604.500 ; \text{Rp.}5.503.750 + \text{Rp.}6.229.500 ; \text{Rp.} 625.000 + \\
&\text{Rp.} 6.813.000)
\end{aligned}$$

$$= \text{Rp.} 7.438.000 \text{ untuk } Z_{12:12} + f_{11}$$

- kumulatif *variable cost* minimum (f_e) Cengkeh :

$$f_0 = 0$$

$$f_1 = \text{Min} (Z_{1:1} + f_0)$$

$$= \text{Min} (\text{Rp.} 275.000 + \text{Rp.} 0)$$

$$= \text{Rp.} 275.000 \text{ untuk } Z_{1:1} + f_0$$

$$f_2 = \text{Min} (Z_{1:2} + f_0 ; Z_{2:2} + f_1)$$

$$= \text{Min} (\text{Rp.}6.265.400 + \text{Rp.}0 ; \text{Rp.} 275.000 + \text{Rp.} 275.000)$$

$$= \text{Rp.} 550.000 \text{ untuk } Z_{2:2} + f_1$$

$$f_3 = \text{Min} (Z_{1:3} + f_0 ; Z_{2:3} + f_1 ; Z_{3:3} + f_2)$$

$$= \text{Min} (\text{Rp.}20.695.400 + \text{Rp.} 0 ; \text{Rp.}7.490.000 + \text{Rp.} 275.000 ; \text{Rp.} 275.000 +$$

$$\text{Rp.} 550.000)$$

$$= \text{Rp.} 825.000 \text{ untuk } Z_{3:3} + f_2$$

$$f_4 = \text{Min} (Z_{1:4} + f_0 ; Z_{2:4} + f_1 ; Z_{3:4} + f_2 ; Z_{4:4} + f_3)$$

$$= \text{Min} (\text{Rp.}52.958.150 + \text{Rp.}0 ; \text{Rp.}28.998.500 + \text{Rp.}275.000 ; \text{Rp.}11.029.250 +$$

$$\text{Rp.} 550.000 ; \text{Rp.} 275.000 + \text{Rp.} 825.000)$$

$$= \text{Rp.} 1.100.000 \text{ untuk } Z_{4:4} + f_3$$

$$\begin{aligned}
f_5 &= \text{Min} (Z_{1:5} + f_0 ; Z_{2:5} + f_1 ; Z_{3:5} + f_2 ; Z_{4:5} + f_3 ; Z_{5:5} + f_4) \\
&= \text{Min} (\text{Rp.}82.403.150 + \text{Rp.}0 ; \text{Rp.}51.082.250 + \text{Rp.}275.000 ; \text{Rp.}25.751.750 + \\
&\text{Rp.}550.000 ; \text{Rp.}7.636.250 + \text{Rp.} 825.000 ; \text{Rp.} 275.000. + \text{Rp.} 1.100.000) \\
&= \text{Rp.} 1.375.000 \text{ untuk } Z_{5:5} + f_4
\end{aligned}$$

$$\begin{aligned}
f_6 &= \text{Min} (Z_{1:6} + f_0 ; Z_{2:6} + f_1 ; Z_{3:6} + f_2 ; Z_{4:6} + f_3 ; Z_{5:6} + f_4 ; Z_{6:6} + f_5) \\
&= \text{Min} (\text{Rp.}87.112.400 + \text{Rp.}0 ; \text{Rp.}54.849.650 + \text{Rp.}275.000 ; \text{Rp.}28.577.300 + \\
&\text{Rp.}550.000 ; \text{Rp.}9.519.950 + \text{Rp.} 825.000 ; \text{Rp.}1.216.850 + \text{Rp.} 1.100.000 ; \text{Rp.} \\
&275.000 + 1.375.000) \\
&= \text{Rp.} 1.650.000 \text{ untuk } Z_{6:6} + f_5
\end{aligned}$$

$$\begin{aligned}
f_7 &= \text{Min} (Z_{1:7} + f_0 ; Z_{2:7} + f_1 ; Z_{3:7} + f_2 ; Z_{4:7} + f_3 ; Z_{5:7} + f_4 ; Z_{6:7} + \\
&f_5 ; Z_{7:7} + f_6) \\
&= \text{Min} (\text{Rp.}118.152.500 + \text{Rp.}0 ; \text{Rp.}80.716.400 + \text{Rp.} 275.000 ; \text{Rp.}49.270.700 \\
&+ \text{Rp.}550.000 ; \text{Rp.}25.040.000 + \text{Rp.}825.000 ; \text{Rp.}11.563.550 + \text{Rp.} 1.100.000 \\
&; \text{Rp.}5.448.350 + 1.375.000 ; \text{Rp.}275.000 + \text{Rp.} 1.650.000) \\
&= \text{Rp.}1.925.000 \text{ untuk } Z_{7:7} + f_6
\end{aligned}$$

$$\begin{aligned}
f_8 &= \text{Min} (Z_{1:8} + f_0 ; Z_{2:8} + f_1 ; Z_{3:8} + f_2 ; Z_{4:8} + f_3 ; Z_{5:8} + f_4 ; Z_{6:8} + \\
&f_5 ; Z_{7:8} + f_6 ; Z_{8:8} + f_7) \\
&= \text{Min} (\text{Rp.}185.638.100 + \text{Rp.}0 ; \text{Rp.}138.561.200 + \text{Rp.} 275.000 ; \text{Rp.}97.474.700 \\
&+ \text{Rp.} 550.000 ; \text{Rp.}63.603.200 + \text{Rp.} 825.000 ; \text{Rp.}40.485.950+ \text{Rp.} 1.100.000 \\
&; \text{Rp.}24.729.950 + 1.375.000 ; \text{Rp.}9.915.800 + \text{Rp.} 1.650.000 ; \text{Rp.}275.000 + \\
&\text{Rp.}1.925.000) \\
&= \text{Rp.} 2.200.000 \text{ untuk } Z_{8:8} + f_7
\end{aligned}$$

$$\begin{aligned}
f_9 &= \text{Min} (Z_{1:9} + f_0 ; Z_{2:9} + f_1 ; Z_{3:9} + f_2 ; Z_{4:9} + f_3 ; Z_{5:9} + f_4 ; Z_{6:9} + \\
&\quad f_5 ; Z_{7:9} + f_6 ; Z_{8:9} + f_7 ; Z_{9:9} + f_8) \\
&= \text{Min} (\text{Rp.}236.837.300 + \text{Rp.}0 ; \text{Rp.}183.360.500 + \text{Rp.}275.000 ; \\
&\quad \text{Rp.}135.874.100 + \text{Rp.} 550.000 ; \text{Rp.}95.602.700 + \text{Rp.} 825.000 ; \text{Rp.}66.085.550 \\
&\quad + \text{Rp.}1.100.000 ; \text{Rp.}43.929.650 + 1.375.000 ; \text{Rp.}22.715.600 + \text{Rp.} 1.650.000 ; \\
&\quad \text{Rp.}6.674.900 + \text{Rp.}1.925.000 ; \text{Rp.} 275.000 + \text{Rp.} 2.200.000) \\
&= \text{Rp.} 2.475.000 \text{ untuk } Z_{9:9} + f_8
\end{aligned}$$

$$\begin{aligned}
f_{10} &= \text{Min} (Z_{1:10} + f_0 ; Z_{2:10} + f_1 ; Z_{3:10} + f_2 ; Z_{4:10} + f_3 ; Z_{5:10} + f_4 ; Z_{6:10} + \\
&\quad f_5 ; Z_{7:10} + f_6 ; Z_{8:10} + f_7 ; Z_{9:10} + f_8 ; Z_{10:10} + f_9) \\
&= \text{Min} (\text{Rp.}262.635.800 + \text{Rp.}0 ; \text{Rp.}206.292.500 + \text{Rp.}275.000 ; \\
&\quad \text{Rp.}155.939.600 + \text{Rp.} 550.000 ; \text{Rp.}112.801.700 + \text{Rp.} 825.000 ; \text{Rp.}80.418.050 \\
&\quad + \text{Rp.}1.100.000 ; \text{Rp.}55.395.650 + 1.375.000 ; \text{Rp.}31.315.100 + \text{Rp.} 1.650.000 ; \\
&\quad \text{Rp.}12.407.900 + \text{Rp.}1.925.000 ; \text{Rp.}3.141.500 + \text{Rp.} 2.200.000 ; \text{Rp.}275.000 + \\
&\quad \text{Rp.}2.475.000) \\
&= \text{Rp.}2.750.000 \text{ untuk } Z_{10:10} + f_9
\end{aligned}$$

$$\begin{aligned}
f_{11} &= \text{Min} (Z_{1:11} + f_0 ; Z_{2:11} + f_1 ; Z_{3:11} + f_2 ; Z_{4:11} + f_3 ; Z_{5:11} + f_4 ; Z_{6:11} + \\
&\quad f_5 ; Z_{7:11} + f_6 ; Z_{8:11} + f_7 ; Z_{9:11} + f_8 ; Z_{10:11} + f_9 ; Z_{11:11} + f_{10}) \\
&= \text{Min} (\text{Rp.}271.742.300 + \text{Rp.}0 ; \text{Rp.}214.488.350 + \text{Rp.}275.000 ; \\
&\quad \text{Rp.}163.224.800 + \text{Rp.} 550.000 ; \text{Rp.}119.176.250 + \text{Rp.} 825.000 ; \text{Rp.}85.881.950 \\
&\quad + \text{Rp.}1.100.000 ; \text{Rp.}59.948.900 + 1.375.000 ; \text{Rp.}34.957.700 + \text{Rp.} 1.650.000 ; \\
&\quad \text{Rp.}15.139.850 + \text{Rp.}1.925.000 ; \text{Rp.}4.962.800 + \text{Rp.} 2.200.000 ; \text{Rp.}1.185.650 \\
&\quad + \text{Rp.}2.475.000 ; \text{Rp.}275.000 + \text{Rp.}2.750.000) \\
&= \text{Rp.} 3.025.000 \text{ untuk } Z_{11:11} + f_{10}
\end{aligned}$$

$$\begin{aligned}
f_{12} &= \text{Min} (Z_{1:12} + f_0 ; Z_{2:12} + f_1 ; Z_{3:12} + f_2 ; Z_{4:12} + f_3 ; Z_{5:12} + f_4 ; Z_{6:12} + \\
&\quad f_5 ; Z_{7:12} + f_6 ; Z_{8:12} + f_7 ; Z_{9:12} + f_8 ; Z_{10:12} + f_9 ; Z_{11:12} + \\
&\quad f_{10} ; Z_{12:12} + f_{11}) \\
&= \text{Min} (\text{Rp.}355.461.650 + \text{Rp.}0 ; \text{Rp.}290.596.850 + \text{Rp.}275.000 ; \\
&\quad \text{Rp.}231.722.450 + \text{Rp.}550.000 ; \text{Rp.}180.063.050 + \text{Rp.}825.000 ; \text{Rp.}139.157.900 \\
&\quad + \text{Rp.}1.100.000 ; \text{Rp.}105.614.000 + \text{Rp.}1.375.000 ; \text{Rp.}73.011.950 + \\
&\quad \text{Rp.}1.650.000 ; \text{Rp.}45.583.250 + \text{Rp.}1.925.000 ; \text{Rp.}27.795.350 + \text{Rp.}2.200.000 \\
&\quad ; \text{Rp.}16.407.350 + \text{Rp.}2.475.000 ; \text{Rp.}7.885.850 + \text{Rp.}2.750.000 ; \text{Rp.} 275.000 + \\
&\quad \text{Rp.} 3.025.000) \\
&= \text{Rp.} 3.300.000 \text{ untuk } Z_{12:12} + f_{11}
\end{aligned}$$

- kumulatif *variable cost* minimum (f_e) Saos :

$$f_0 = 0$$

$$\begin{aligned}
f_1 &= \text{Min} (Z_{1:1} + f_0) \\
&= \text{Min} (\text{Rp.} 125.000 + \text{Rp.} 0) \\
&= \text{Rp.} 125.000 \text{ untuk } Z_{1:1} + f_0
\end{aligned}$$

$$\begin{aligned}
f_2 &= \text{Min} (Z_{1:2} + f_0 ; Z_{2:2} + f_1) \\
&= \text{Min} (\text{Rp.}567.890 + \text{Rp.}0 ; \text{Rp.} 125.000 + \text{Rp.} 125.000) \\
&= \text{Rp.} 250.000 \text{ untuk } Z_{2:2} + f_1
\end{aligned}$$

$$\begin{aligned}
f_3 &= \text{Min} (Z_{1:3} + f_0 ; Z_{2:3} + f_1 ; Z_{3:3} + f_2) \\
&= \text{Min} (\text{Rp.}1.633.490 + \text{Rp.} 0 ; \text{Rp.}657.800 + \text{Rp.} 125.000 ; \text{Rp.}125.000 + \text{Rp.} \\
&\quad 250.000) \\
&= \text{Rp.} 375.000 \text{ untuk } Z_{3:3} + f_3
\end{aligned}$$

$$f_4 = \text{Min} (Z_{1:4} + f_0 ; Z_{2:4} + f_1 ; Z_{3:4} + f_2 ; Z_{4:4} + f_3)$$

$$= \text{Min (Rp.4.021.100 + Rp. 0 ; Rp.2.249.540 + Rp. 125.000 ; Rp.920.870 + Rp. 250.000 ; Rp.125.000 + 375.000)}$$

$$= \text{Rp. 500.000 untuk } Z_{4:4} + f_3$$

$$f_5 = \text{Min (} Z_{1:5} + f_0 ; Z_{2:5} + f_1 ; Z_{3:5} + f_2 ; Z_{4:5} + f_3 ; Z_{5:5} + f_4)$$

$$= \text{Min (Rp.6.205.580 + Rp. 0 ; Rp.3.887.900 + Rp. 125.000 ; Rp.2.013.110 + Rp. 250.000 ; Rp.671.120 + 375.000 ; Rp.125.000. + Rp. 500.000)}$$

$$= \text{Rp. 625.000 untuk } Z_{5:5} + f_4$$

$$f_6 = \text{Min (} Z_{1:6} + f_0 ; Z_{2:6} + f_1 ; Z_{3:6} + f_2 ; Z_{4:6} + f_3 ; Z_{5:6} + f_4 ; Z_{6:6} + f_5)$$

$$= \text{Min (Rp.6.555.230 + Rp. 0 ; Rp.4.167.620 + Rp. 125.000 ; Rp.2.222.900 + Rp. 250.000 ; Rp.810.980 + 375.000 ; Rp.194.930 + Rp. 500.000 ; Rp.125.000 + Rp.625.000)}$$

$$= \text{Rp. 694.930 untuk } Z_{5:6} + f_4$$

$$f_7 = \text{Min (} Z_{1:7} + f_0 ; Z_{2:7} + f_1 ; Z_{3:7} + f_2 ; Z_{4:7} + f_3 ; Z_{5:7} + f_4 ; Z_{6:7} + f_5 ; Z_{7:7} + f_6)$$

$$= \text{Min (Rp.8.852.930 + Rp. 0 ; Rp.6.082.370 + Rp. 125.000 ; Rp.3.754.700 + Rp. 250.000 ; Rp.1.959.830 + 375.000 ; Rp.960.830 + Rp. 500.000 ; Rp.507.950 + 625.000 ; Rp.125.000 + Rp. 694.930)}$$

$$= \text{Rp.819.930 untuk } Z_{7:7} + f_6$$

$$f_8 = \text{Min (} Z_{1:8} + f_0 ; Z_{2:8} + f_1 ; Z_{3:8} + f_2 ; Z_{4:8} + f_3 ; Z_{5:8} + f_4 ; Z_{6:8} + f_5 ; Z_{7:8} + f_6 ; Z_{8:8} + f_7)$$

$$= \text{Min (Rp.13.841.270 + Rp. 0 ; Rp.10.358.090 + Rp.125.000 ; Rp.7.317.800 + Rp.250.000 ; Rp.4.810.310 + Rp.375.000 ; Rp.3.098.690 + Rp.500.000 ; Rp.1.933.190 + 625.000 ; Rp.837.620 + Rp.694.930 ; Rp.125.000 + Rp.819.930)}$$

$$= \text{Rp. } 944.930 \text{ untuk } Z_{8:8} + f_7$$

$$f_9 = \text{Min} (Z_{1:9} + f_0 ; Z_{2:9} + f_1 ; Z_{3:9} + f_2 ; Z_{4:9} + f_3 ; Z_{5:9} + f_4 ; Z_{6:9} + f_5 ; Z_{7:9} + f_6 ; Z_{8:9} + f_7 ; Z_{9:9} + f_8)$$

$$= \text{Min} (\text{Rp.}17.624.150 + \text{Rp. } 0 ; \text{Rp.}13.668.110 + \text{Rp. } 125.000 ; \text{Rp.}10.154.960 + \text{Rp.}250.000 ; \text{Rp.}7.174.610 + \text{Rp.}375.000 ; \text{Rp.}4.990.130 + \text{Rp.}500.000 ; \text{Rp.}3.351.770 + 625.000 ; \text{Rp.}1.783.340 + \text{Rp.}694.930 ; \text{Rp.}597.860 + \text{Rp.}819.930 ; \text{Rp.}125.000 + \text{Rp.}944.930)$$

$$= \text{Rp. } 1.069.930 \text{ untuk } Z_{9:9} + f_8$$

$$f_{10} = \text{Min} (Z_{1:10} + f_0 ; Z_{2:10} + f_1 ; Z_{3:10} + f_2 ; Z_{4:10} + f_3 ; Z_{5:10} + f_4 ; Z_{6:10} + f_5 ; Z_{7:10} + f_6 ; Z_{8:10} + f_7 ; Z_{9:10} + f_8 ; Z_{10:10} + f_9)$$

$$= \text{Min} (\text{Rp.}19.542.230 + \text{Rp. } 0 ; \text{Rp.}15.373.070 + \text{Rp. } 125.000 ; \text{Rp.}11.646.800 + \text{Rp.}250.000 ; \text{Rp.}8.453.330 + 375.000 ; \text{Rp.}6.055.730 + \text{Rp.}500.000 ; \text{Rp.}4.204.250 + \text{Rp.}625.000 ; \text{Rp.}2.422.700 + \text{Rp.}694.930 ; \text{Rp.}1.024.100 + \text{Rp.}819.930 ; \text{Rp.}338.120 + \text{Rp.}944.930 ; \text{Rp.}125.000 + \text{Rp. } 1.069.930)$$

$$= \text{Rp.}1.194.930 \text{ untuk } Z_{10:10} + f_9$$

$$f_{11} = \text{Min} (Z_{1:11} + f_0 ; Z_{2:11} + f_1 ; Z_{3:11} + f_2 ; Z_{4:11} + f_3 ; Z_{5:11} + f_4 ; Z_{6:11} + f_5 ; Z_{7:11} + f_6 ; Z_{8:11} + f_7 ; Z_{9:11} + f_8 ; Z_{10:11} + f_9 ; Z_{11:11} + f_{10})$$

$$= \text{Min} (\text{Rp.}20.208.230 + \text{Rp. } 0 ; \text{Rp.}15.972.470 + \text{Rp. } 125.000 ; \text{Rp.}12.179.600 + \text{Rp.}250.000 ; \text{Rp.}8.919.530 + \text{Rp.}375.000 ; \text{Rp.}6.455.330 + \text{Rp.}500.000 ; \text{Rp.}4.537.250 + \text{Rp.}625.000 ; \text{Rp.}2.689.100 + \text{Rp.}694.930 ; \text{Rp.}1.223.900 + \text{Rp.}819.930 ; \text{Rp.}471.320 + \text{Rp.}944.930 ; \text{Rp.}191.600 + \text{Rp. } 1.069.930 ; \text{Rp.}125.000 + \text{Rp.}1.194.930)$$

$$= \text{Rp. } 1.261.530 \text{ untuk } Z_{10:11} + f_9$$

$$\begin{aligned}
f_{12} &= \text{Min} (Z_{1:12} + f_0 ; Z_{2:12} + f_1 ; Z_{3:12} + f_2 ; Z_{4:12} + f_3 ; Z_{5:12} + f_4 ; Z_{6:12} + \\
&\quad f_5 ; Z_{7:12} + f_6 ; Z_{8:12} + f_7 ; Z_{9:12} + f_8 ; Z_{10:12} + f_9 ; Z_{11:12} + \\
&\quad f_{10} ; Z_{12:12} + f_{11}) \\
&= \text{Min} (Z_{1:11} + f_0 ; Z_{2:11} + f_1 ; Z_{3:11} + f_2 ; Z_{4:11} + f_3 ; Z_{5:11} + f_4 ; Z_{6:11} + \\
&\quad f_5 ; Z_{7:11} + f_6 ; Z_{8:11} + f_7 ; Z_{9:11} + f_8 ; Z_{10:11} + f_9 ; Z_{11:11} + f_{10}) \\
&= \text{Min} (\text{Rp.}26.398.700 + \text{Rp.} 0 ; \text{Rp.}21.600.170 + \text{Rp.} 125.000 ; \text{Rp.}17.244.530 \\
&\quad + \text{Rp.}250.000 ; \text{Rp.}13.421.690 + \text{Rp.}375.000 ; \text{Rp.}10.394.720 + \text{Rp.}500.000 ; \\
&\quad \text{Rp.}7.913.870 + \text{Rp.}625.000 ; \text{Rp.}5.502.950 + \text{Rp.}694.930 ; \text{Rp.}3.474.980 + \\
&\quad \text{Rp.}819.930 ; \text{Rp.}2.159.630 + \text{Rp.}944.930 ; \text{Rp.}1.317.140 + \text{Rp.} 1.069.930 ; \\
&\quad \text{Rp.}687.770 + \text{Rp.}1.194.930 ; \text{Rp.}125.000 + \text{Rp.} 1.261.530) \\
&= \text{Rp.} 1.386.530 \text{ untuk } Z_{12:12} + f_{11}
\end{aligned}$$

LAMPIRAN 5

- Solusi optimal Jumlah Pemesanan Maksimum (f_N) Tembakau

$$f_{12} = Z_{12:12} + f_{11}$$

$Z_{12:12}$ didapatkan dari baris 12 kolom 12 dari tabel 4.17 yaitu sebesar Rp.625.000, sedangkan f_{11} merupakan nilai minimum dari kolom 11 dari tabel 4.20 yaitu sebesar Rp.6.813.000. Sehingga menghasilkan f_{12} sebesar Rp.7.438.000. Berarti pemesanan dilakukan pada periode 12 (Agustus 2019) untuk memenuhi kebutuhan pada periode 12 (Agustus 2019) saja sebanyak 6.505 Kg.

$$f_{11} = Z_{10:11} + f_9$$

$Z_{11:11}$ didapatkan dari baris 10 kolom 11 dari tabel 4.17 yaitu sebesar Rp. 1.208.500, sedangkan f_9 merupakan nilai minimum dari kolom 19 dari tabel 4.20 yaitu sebesar Rp.6.229.500 Sehingga menghasilkan f_{12} sebesar Rp.6.813.000. Berarti pemesanan

dilakukan pada periode 10 (Juni 2019) untuk memenuhi kebutuhan hingga periode 11 (juli 2019) sebanyak 3.228 Kg. Dengan permintaan pada periode 10 (Juni 2019) sebanyak 2.450 Kg, dan Periode 11 (juli 2019) sebanyak 778 Kg.

$$f_9 = Z_{9:9} + f_8$$

$Z_{9:9}$ didapatkan dari baris 9 kolom 9 dari tabel 4.17 yaitu sebesar Rp. 625.000 , sedangkan f_8 merupakan nilai minimum dari kolom 8 dari tabel 4.20 yaitu sebesar Rp.4.979.500 Sehingga menghasilkan f_9 sebesar 5.604.500 Berarti pemesanan dilakukan pada periode 9 (Mei 2019) untuk memenuhi Kebutuhan pada periode 9 (Mei 2019) saja sebanyak 5.470 Kg.

$$f_8 = Z_{8:8} + f_7$$

$Z_{8:8}$ didapatkan dari baris 8 kolom 8 dari tabel 4.17 yaitu sebesar Rp.625.000, sedangkan f_7 merupakan nilai minimum dari kolom 7 dari tabel 4.20 yaitu sebesar Rp.4.354.500. Sehingga menghasilkan f_8 sebesar Rp.4.979.500. Berarti pemesanan dilakukan pada periode 8 (April 2019) saja sebanyak 8.239 Kg.

$$f_7 = Z_{7:7} + f_6$$

$Z_{7:7}$ didapatkan dari baris 7 kolom 7 dari tabel 4.17 yaitu sebesar Rp. 625.000, sedangkan f_6 merupakan nilai minimum dari kolom 6 dari tabel 4.20 yaitu sebesar Rp.3.729.500 Sehingga menghasilkan f_7 sebesar Rp.4.354.500 Berarti pemesanan dilakukan pada periode 7 (Maret 2019) untuk memenuhi Kebutuhan pada periode 7 (Maret 2019) saja sebanyak 4.421 Kg

$$f_6 = Z_{5:6} + f_4$$

$Z_{5:6}$ didapatkan dari baris 5 kolom 6 dari tabel 4.17 yaitu sebesar Rp. 1.229.500, sedangkan f_4 merupakan nilai minimum dari kolom 4 dari tabel 4.20 yaitu sebesar

Rp.2.500.000 Sehingga menghasilkan f_6 sebesar Rp.3.279.500. Berarti pemesanan dilakukan pada periode 5 (Januari 2019) untuk memenuhi kebutuhan hingga periode 6 (Februari 2019) sebanyak 7.098 Kg. Dengan permintaan pada periode 5 (Januari 2019) sebanyak 6.292 Kg, dan Periode 6 (Februari 2019) sebanyak 806 Kg.

$$f_4 = Z_{4:4} + f_3$$

$Z_{4:4}$ didapatkan dari baris 4 kolom 4 dari tabel 4.17 yaitu sebesar Rp. 625.000 , sedangkan f_3 merupakan nilai minimum dari kolom 3 dari tabel 4.20 yaitu sebesar Rp.1.875.000 Sehingga menghasilkan f_4 sebesar Rp.2.500.000 Berarti pemesanan dilakukan pada periode 4 (Desember 2018) untuk memenuhi Kebutuhan pada periode 4 (Desember 2018) saja sebanyak 9.192 Kg

$$f_3 = Z_{3:3} + f_2$$

$Z_{3:3}$ didapatkan dari baris 3 kolom 3 dari tabel 4.17 yaitu sebesar Rp. 625.000 , sedangkan f_2 merupakan nilai minimum dari kolom 2 dari tabel 4.20 yaitu sebesar Rp.1.250.000 Sehingga menghasilkan f_3 sebesar Rp.1.875.000 Berarti pemesanan dilakukan pada periode 3 (November 2018) untuk memenuhi Kebutuhan pada periode 4 (November 2018) saja sebanyak 6.167 Kg

$$f_2 = Z_{2:2} + f_1$$

$Z_{2:2}$ didapatkan dari baris 2 kolom 2 dari tabel 4.17 yaitu sebesar Rp. 625.000 , sedangkan f_1 merupakan nilai minimum dari kolom 1 dari tabel 4.20 yaitu sebesar Rp.625.000 Sehingga menghasilkan f_2 sebesar Rp.1.250.000 Berarti pemesanan dilakukan pada periode 2 (Oktober 2018) untuk memenuhi Kebutuhan pada periode 2 (Oktober 2018) saja sebanyak 5.120 Kg

$$f_1 = Z_{1:1} + f_0$$

$Z_{1:1}$ didapatkan dari baris 1 kolom 1 dari tabel 4.17 yaitu sebesar Rp. 625.000 ,
 sedangkan f_0 merupakan nilai minimum dari kolom 0 dari tabel 4.20 yaitu sebesar
 Rp.0 Sehingga menghasilkan f_1 sebesar Rp.625.000 Berarti pemesanan dilakukan
 pada periode 1 (September 2018) untuk memenuhi Kebutuhan pada periode 1
 (September 2018) saja sebanyak 3.538 Kg

- Solusi optimal Jumlah Pemesanan Maksimum (f_N) Cengkeh :

$$f_{12} = Z_{12:12} + f_{11}$$

$Z_{12:12}$ didapatkan dari baris 12 kolom 12 dari tabel 4.18 yaitu sebesar Rp. 275.000,
 sedangkan f_{11} merupakan nilai minimum dari kolom 11 dari tabel 4.21 yaitu sebesar
 Rp.3.025.000. Sehingga menghasilkan f_{12} sebesar Rp.3.300.000. Berarti
 pemesanan dilakukan pada periode 12 (Agustus 2019) untuk memenuhi kebutuhan
 pada periode 12 (Agustus 2019) saja sebanyak 3.903 Kg.

$$f_{11} = Z_{11:11} + f_{10}$$

$Z_{11:11}$ didapatkan dari baris 11 kolom 11 dari tabel 4.18 yaitu sebesar Rp. 275.000,
 sedangkan f_{10} merupakan nilai minimum dari kolom 10 dari tabel 4.21 yaitu sebesar
 Rp.2.750.000 Sehingga menghasilkan f_{11} sebesar Rp.3.025.000. Berarti pemesanan
 dilakukan pada periode 11 (Juli 2019) untuk memenuhi kebutuhan pada periode 11
 (Juli 2019) saja sebanyak 467 Kg.

$$f_{10} = Z_{10:10} + f_9$$

$Z_{10:10}$ didapatkan dari baris 10 kolom 10 dari tabel 4.18 yaitu sebesar Rp. 275.000,
 sedangkan f_9 merupakan nilai minimum dari kolom 9 dari tabel 4.21 yaitu sebesar
 Rp.2.475.000 Sehingga menghasilkan f_{10} sebesar Rp.2.750.000 Berarti pemesanan

dilakukan pada periode 10 (Juni 2019) untuk memenuhi Kebutuhan pada periode 10 (Juni 2019) saja sebanyak 1.470 Kg.

$$f_9 = Z_{9:9} + f_8$$

$Z_{9:9}$ didapatkan dari baris 9 kolom 9 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_8 merupakan nilai minimum dari kolom 8 dari tabel 4.21 yaitu sebesar Rp.2.200.000 Sehingga menghasilkan f_9 sebesar Rp.2.475.000, Berarti pemesanan dilakukan pada periode 9 (Mei 2019) untuk memenuhi Kebutuhan pada periode 9 (Mei 2019) saja sebanyak 3.282 Kg.

$$f_8 = Z_{8:8} + f_7$$

$Z_{8:8}$ didapatkan dari baris 8 kolom 8 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_7 merupakan nilai minimum dari kolom 7 dari tabel 4.21 yaitu sebesar Rp.1.925.000 Sehingga menghasilkan f_8 sebesar Rp.2.200.000, Berarti pemesanan dilakukan pada periode 8 (April 2019) untuk memenuhi Kebutuhan pada periode 8 (April 2019) saja sebanyak 4.944 Kg.

$$f_7 = Z_{7:7} + f_6$$

$Z_{7:7}$ didapatkan dari baris 7 kolom 7 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_6 merupakan nilai minimum dari kolom 6 dari tabel 4.21 yaitu sebesar Rp.1.650.000 Sehingga menghasilkan f_7 sebesar Rp.1.925.000, Berarti pemesanan dilakukan pada periode 7 (Maret 2019) untuk memenuhi Kebutuhan pada periode 7 (Maret 2019) saja sebanyak 2.653 Kg.

$$f_6 = Z_{6:6} + f_5$$

$Z_{6:6}$ didapatkan dari baris 6 kolom 6 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_5 merupakan nilai minimum dari kolom 5 dari tabel 4.21 yaitu sebesar

Rp.1.375.000 Sehingga menghasilkan f_6 sebesar Rp.1.650.000, Berarti pemesanan dilakukan pada periode 6 (Februari 2019) untuk memenuhi Kebutuhan pada periode 6 (Februari 2019) saja sebanyak 483 Kg.

$$f_5 = Z_{5:5} + f_4$$

$Z_{5:5}$ didapatkan dari baris 5 kolom 5 dari tabel 4.18 yaitu sebesar Rp. 275.000, sedangkan f_4 merupakan nilai minimum dari kolom 4 dari tabel 4.21 yaitu sebesar Rp.1.100.000 Sehingga menghasilkan f_5 sebesar Rp.1.375.000 Berarti pemesanan dilakukan pada periode 5 (Januari 2019) untuk memenuhi Kebutuhan pada periode 5 (Januari 2019) saja sebanyak 3.775 Kg

$$f_4 = Z_{4:4} + f_3$$

$Z_{4:4}$ didapatkan dari baris 4 kolom 4 dari tabel 4.18 yaitu sebesar Rp. 275.000, sedangkan f_3 merupakan nilai minimum dari kolom 3 dari tabel 4.21 yaitu sebesar Rp.825.000 Sehingga menghasilkan f_4 sebesar Rp.1.100.000 Berarti pemesanan dilakukan pada periode 4 (Desember 2018) untuk memenuhi Kebutuhan pada periode 4 (Desember 2018) saja sebanyak 5.515 Kg

$$f_3 = Z_{3:3} + f_2$$

$Z_{3:3}$ didapatkan dari baris 3 kolom 3 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_2 merupakan nilai minimum dari kolom 2 dari tabel 4.21 yaitu sebesar Rp.550.000 Sehingga menghasilkan f_3 sebesar Rp.825.000 Berarti pemesanan dilakukan pada periode 3 (November 2018) untuk memenuhi Kebutuhan pada periode 4 (November 2018) saja sebanyak 3.700 Kg

$$f_2 = Z_{2:2} + f_1$$

$Z_{2:2}$ didapatkan dari baris 2 kolom 2 dari tabel 4.18 yaitu sebesar Rp. 275.000, sedangkan f_1 merupakan nilai minimum dari kolom 1 dari tabel 4.21 yaitu sebesar Rp.275.000 Sehingga menghasilkan f_2 sebesar Rp.550.000 Berarti pemesanan dilakukan pada periode 2 (Oktober 2018) untuk memenuhi Kebutuhan pada periode 2 (Oktober 2018) saja sebanyak 3.072 Kg

$$f_1 = Z_{1:1} + f_0$$

$Z_{1:1}$ didapatkan dari baris 1 kolom 1 dari tabel 4.18 yaitu sebesar Rp. 275.000 , sedangkan f_0 merupakan nilai minimum dari kolom 0 dari tabel 4.21 yaitu sebesar Rp.0 Sehingga menghasilkan f_1 sebesar Rp.275.000 Berarti pemesanan dilakukan pada periode 1 (September 2018) untuk memenuhi Kebutuhan pada periode 1 (September 2018) saja sebanyak 2.123 Kg.

- Solusi optimal Jumlah Pemesanan Maksimum (f_N) Saos :

$$f_{12} = Z_{12:12} + f_{11}$$

$Z_{12:12}$ didapatkan dari baris 12 kolom 12 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_{11} merupakan nilai minimum dari kolom 11 dari tabel 4.22 yaitu sebesar Rp.1.261.530. Sehingga menghasilkan f_{12} sebesar Rp.1.386.530. Berarti pemesanan dilakukan pada periode 12 (Agustus 2019) untuk memenuhi kebutuhan pada periode 12 (Agustus 2019) saja sebanyak 169 Liter.

$$f_{11} = Z_{10:11} + f_9$$

$Z_{10:11}$ didapatkan dari baris 10 kolom 11 dari tabel 4.19 yaitu sebesar Rp. 191.600 sedangkan f_9 merupakan nilai minimum dari kolom 9 dari tabel 4.22 yaitu sebesar Rp.1.069.930 Sehingga menghasilkan f_{11} sebesar Rp.1.261.530. Berarti pemesanan dilakukan pada periode 10 (Juni 2019) untuk memenuhi kebutuhan hingga periode

11 (juli 2019) sebanyak 84 Liter. Dengan permintaan pada periode 10 (Juni 2019) sebanyak 64 Liter, dan Periode 11 (juli 2019) sebanyak 20 Liter.

$$f_9 = Z_{9:9} + f_8$$

$Z_{9:9}$ didapatkan dari baris 9 kolom 9 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_8 merupakan nilai minimum dari kolom 8 dari tabel 4.22 yaitu sebesar Rp.944.930 Sehingga menghasilkan f_9 sebesar Rp.1.069.930 Berarti pemesanan dilakukan pada periode 9 (Mei 2019) untuk memenuhi Kebutuhan pada periode 9 (Mei 2019) saja sebanyak 142 Liter.

$$f_8 = Z_{8:8} + f_7$$

$Z_{8:8}$ didapatkan dari baris 8 kolom 8 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_7 merupakan nilai minimum dari kolom 7 dari tabel 4.22 yaitu sebesar Rp.819.930. Sehingga menghasilkan f_8 sebesar Rp.944.930. Berarti pemesanan dilakukan pada periode 8 (April 2019) saja sebanyak 214 Liter.

$$f_7 = Z_{7:7} + f_6$$

$Z_{7:7}$ didapatkan dari baris 7 kolom 7 dari tabel 4.19 yaitu sebesar Rp. Rp.125.000, sedangkan f_6 merupakan nilai minimum dari kolom 6 dari tabel 4.22 yaitu sebesar Rp.694.930 Sehingga menghasilkan f_7 sebesar Rp.819.930 Berarti pemesanan dilakukan pada periode 7 (Maret 2019) untuk memenuhi Kebutuhan pada periode 7 (Maret 2019) saja sebanyak 115 Liter

$$f_6 = Z_{5:6} + f_4$$

$Z_{5:6}$ didapatkan dari baris 5 kolom 6 dari tabel 4.19 yaitu sebesar Rp. 194.930, sedangkan f_4 merupakan nilai minimum dari kolom 4 dari tabel 4.22 yaitu sebesar Rp.500.000 Sehingga menghasilkan f_6 sebesar Rp.694.930. Berarti pemesanan

dilakukan pada periode 5 (Januari 2019) untuk memenuhi kebutuhan hingga periode 6 (Februari 2019) sebanyak 185 Liter. Dengan permintaan pada periode 5 (Januari 2019) sebanyak 164 Liter, dan Periode 6 (Februari 2019) sebanyak 21 Liter.

$$f_4 = Z_{4:4} + f_3$$

$Z_{4:4}$ didapatkan dari baris 4 kolom 4 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_3 merupakan nilai minimum dari kolom 3 dari tabel 4.22 yaitu sebesar Rp.375.000 Sehingga menghasilkan f_4 sebesar Rp.500.000 Berarti pemesanan dilakukan pada periode 4 (Desember 2018) untuk memenuhi Kebutuhan pada periode 4 (Desember 2018) saja sebanyak 239 Liter

$$f_3 = Z_{3:3} + f_2$$

$Z_{3:3}$ didapatkan dari baris 3 kolom 3 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_2 merupakan nilai minimum dari kolom 2 dari tabel 4.22 yaitu sebesar Rp.250.000 Sehingga menghasilkan f_3 sebesar Rp.375.000 Berarti pemesanan dilakukan pada periode 3 (November 2018) untuk memenuhi Kebutuhan pada periode 4 (November 2018) saja sebanyak 160 Liter

$$f_2 = Z_{2:2} + f_1$$

$Z_{2:2}$ didapatkan dari baris 2 kolom 2 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_1 merupakan nilai minimum dari kolom 1 dari tabel 4.22 yaitu sebesar Rp.125.000 Sehingga menghasilkan f_2 sebesar Rp.250.000 Berarti pemesanan dilakukan pada periode 2 (Oktober 2018) untuk memenuhi Kebutuhan pada periode 2 (Oktober 2018) saja sebanyak 133 Liter

$$f_1 = Z_{1:1} + f_0$$

$Z_{1:1}$ didapatkan dari baris 1 kolom 1 dari tabel 4.19 yaitu sebesar Rp.125.000, sedangkan f_0 merupakan nilai minimum dari kolom 0 dari tabel 4.22 yaitu sebesar Rp.0 Sehingga menghasilkan f_1 sebesar Rp.125.000 Berarti pemesanan dilakukan pada periode 1 (September 2018) untuk memenuhi Kebutuhan pada periode 1 (September 2018) saja sebanyak 92 Liter

LAMPIRAN 6

- Menghitung *Cummulative Variable Cost* Tembakau :

Keterangan:

$$C = \text{Rp.}625.000, \quad \text{Order Quantity} = F_N \text{ (tabel 4.23),}$$

$$h = 1,5\% = 0,015, \quad \text{Demand} = \text{Permintaan Bahan Baku (tabel 4.5).}$$

$$P = \text{Rp.}50.000,$$

$$\begin{aligned} \text{September 2018 : (CVC)} &= \text{Rp.}625.000 + (0.015 \times \text{Rp}50.000)(3.538-3.538) \\ &= \text{Rp.} 625.000 \end{aligned}$$

$$\begin{aligned} \text{Oktober 2018: (CVC)} &= \text{Rp.}625.000 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\ &\quad (5.120-5.120) \\ &= \text{Rp.}1.250.000 \end{aligned}$$

$$\begin{aligned} \text{November 2018: (CVC)} &= \text{Rp.}1.250.000 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\ &\quad (6.167-6.167) \\ &= \text{Rp.}1.875.000 \end{aligned}$$

$$\begin{aligned} \text{Desember 2018: (CVC)} &= \text{Rp.}1.875.000 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\ &\quad (9.192-9.192) \\ &= \text{Rp.}2.500.000 \end{aligned}$$

$$\text{Januari 2019: (CVC)} = \text{Rp.} 2.500.000 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000)$$

$$\begin{aligned}
& (7.098-6.292) \\
& = \text{Rp.}3.729.500 \\
\text{Februari 2019: (CVC)} & = \text{Rp.}3.729.500 + \text{Rp.}0 + (0.015 \times \text{Rp.}50.000) \\
& (806-806) \\
& = \text{Rp.}3.729.500 \\
\text{Maret 2019: (CVC)} & = \text{Rp.}3.729.500 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\
& (4.421-4.421) \\
& = \text{Rp.}4.354.500 \\
\text{April 2019: (CVC)} & = \text{Rp.}4.354.500 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\
& (8.239-8.239) \\
& = \text{Rp.}4.979.500 \\
\text{Mei 2019: (CVC)} & = \text{Rp.}4.979.500 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\
& (5.470-5.470) \\
& = \text{Rp.}5.604.500 \\
\text{Juni 2019: (CVC)} & = \text{Rp.}5.604.500 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\
& (3.228-2.450) \\
& = \text{Rp.}6.813.000 \\
\text{Juli 2019: (CVC)} & = \text{Rp.}6.813.000 + \text{Rp.}0 + (0.015 \times \text{Rp.}50.000) \\
& (778-778) \\
& = \text{Rp.}6.813.000 \\
\text{Agustus 2019: (CVC)} & = \text{Rp.}6.813.000 + \text{Rp.}625.000 + (0.015 \times \text{Rp.}50.000) \\
& (6.505-6.505) \\
& = \text{Rp.} 7.438.000
\end{aligned}$$

- Menghitung *Cummulative Variable Cost* Cengkeh :

Keterangan:

$C = \text{Rp.}275.000$, $Order\ Quantity = F_N$ (tabel 4.23),

$h = 1,5\% = 0,015$, $Demand =$ Permintaan Bahan Baku (tabel 4.6).

$P = \text{Rp.}130.000$,

$$\begin{aligned} \text{September 2018 : (CVC)} &= \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000)(2.123-2.123) \\ &= \text{Rp.}275.000 \end{aligned}$$

$$\begin{aligned} \text{Oktober 2018: (CVC)} &= \text{Rp.}275.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000) \\ &\quad (3.072-3.072) \\ &= \text{Rp.}550.000 \end{aligned}$$

$$\begin{aligned} \text{November 2018: (CVC)} &= \text{Rp.}550.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000) \\ &\quad (3.700-3.700) \\ &= \text{Rp.}825.000 \end{aligned}$$

$$\begin{aligned} \text{Desember 2018: (CVC)} &= \text{Rp.}825.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000) \\ &\quad (5.515-5.515) \\ &= \text{Rp.}1.100.000 \end{aligned}$$

$$\begin{aligned} \text{Januari 2019: (CVC)} &= \text{Rp.}1.100.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000) \\ &\quad (3.775-3.775) \\ &= \text{Rp.}1.375.000 \end{aligned}$$

$$\begin{aligned} \text{Februari 2019: (CVC)} &= \text{Rp.}1.375.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000) \\ &\quad (483-483) \\ &= \text{Rp.}1.650.000 \end{aligned}$$

$$\text{Maret 2019: (CVC)} = \text{Rp.}1.650.000 + \text{Rp.}275.000 + (0.015 \times \text{Rp}130.000)$$

$$\begin{aligned}
& (2.653-2.653) \\
& = \text{Rp.1.925.000} \\
\text{April 2019: (CVC)} & = \text{Rp.1.925.000} + \text{Rp.275.000} + (0.015 \times \text{Rp130.000}) \\
& (4.944-4.944) \\
& = \text{Rp.2.200.000} \\
\text{Mei 2019: (CVC)} & = \text{Rp.2.200.000} + \text{Rp.275.000} + (0.015 \times \text{Rp130.000}) \\
& (3.282-3.282) \\
& = \text{Rp.2.475.000} \\
\text{Juni 2019: (CVC)} & = \text{Rp.2.475.000} + \text{Rp.275.000} + (0.015 \times \text{Rp130.000}) \\
& (1.470-1.470) \\
& = \text{Rp.2.750.000} \\
\text{Juli 2019: (CVC)} & = \text{Rp.2.750.000} + \text{Rp.275.000} + (0.015 \times \text{Rp130.000}) \\
& (467-467) \\
& = \text{Rp.3.025.000} \\
\text{Agustus 2019: (CVC)} & = \text{Rp.3.025.000} + \text{Rp.275.000} + (0.015 \times \text{Rp130.000}) \\
& (3.903-3.903) \\
& = \text{Rp. 3.300.000}
\end{aligned}$$

- Menghitung *Cummulative Variable Cost* Saos :

Keterangan:

$C = \text{Rp.125.000}$, $\text{Order Quantity} = F_N$ (tabel 4.23),

$h = 1,5\% = 0,015$, $\text{Demand} = \text{Permintaan Bahan Baku}$ (tabel 4.7).

$P = \text{Rp.222.000}$,

September 2018 : (CVC)= $\text{Rp.125.000} + (0.015 \times \text{Rp222.000})(92-92)$

$$= \text{Rp.125.000}$$

$$\begin{aligned} \text{Oktober 2018: (CVC)} &= \text{Rp.125.000} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000) \\ &\quad (133-133) \\ &= \text{Rp.250.000} \end{aligned}$$

$$\begin{aligned} \text{November 2018: (CVC)} &= \text{Rp.250.000} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000) \\ &\quad (160-160) \\ &= \text{Rp.375.000} \end{aligned}$$

$$\begin{aligned} \text{Desember 2018: (CVC)} &= \text{Rp.375.000} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000) \\ &\quad (239-239) \\ &= \text{Rp.500.000} \end{aligned}$$

$$\begin{aligned} \text{Januari 2019: (CVC)} &= \text{Rp.500.000} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000) \\ &\quad (185-164) \\ &= \text{Rp.694.930} \end{aligned}$$

$$\begin{aligned} \text{Februari 2019: (CVC)} &= \text{Rp.694.930} + \text{Rp.0} + (0.015 \times \text{Rp}222.000) \\ &\quad (21-21) \\ &= \text{Rp.694.930} \end{aligned}$$

$$\begin{aligned} \text{Maret 2019: (CVC)} &= \text{Rp.694.930} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000) \\ &\quad (115-115) \\ &= \text{Rp.819.930} \end{aligned}$$

$$\begin{aligned} \text{April 2019: (CVC)} &= \text{Rp.819.930} + \text{Rp.0} + (0.015 \times \text{Rp}222.000) \\ &\quad (214-214) \\ &= \text{Rp.944.930} \end{aligned}$$

$$\text{Mei 2019: (CVC)} = \text{Rp.944.930} + \text{Rp.125.000} + (0.015 \times \text{Rp}222.000)$$

$$\begin{aligned}
& (142-142) \\
& = \text{Rp.1.069.930} \\
\text{Juni 2019: (CVC)} & = \text{Rp.1.069.930} + \text{Rp.125.000} + (0.015 \times \text{Rp.222.000}) \\
& (84-64) \\
& = \text{Rp.1.261.530} \\
\text{Juli 2019: (CVC)} & = \text{Rp.1.261.530} + \text{Rp.125.000} + (0.015 \times \text{Rp.222.000}) \\
& (20-20) \\
& = \text{Rp.1.261.530} \\
\text{Agustus 2019: (CVC)} & = \text{Rp.1.261.530} + \text{Rp.125.000} + (0.015 \times \text{Rp.222.000}) \\
& (169-69) \\
& = \text{Rp.1.386.530}
\end{aligned}$$

LAMPIRAN 7

Perhitungan biaya persediaan metode Algoritma Wagner Whitin

➤ Bahan Baku Rokok (Tembakau) :

- September 2018

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. 625.000}$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. 50.000} = \text{Rp. 750}$$

$$\begin{aligned}
\text{Biaya penyimpanan} & = \text{Sisa} \times \text{biaya simpan} \\
& = 0 \times \text{Rp. 750} = \text{Rp.0}
\end{aligned}$$

$$\begin{aligned}
\text{Biaya Pembelian} & = \text{Pembelian} \times \text{harga beli} \\
& = 3.538 \times \text{Rp. 50.000} = \text{Rp.176.900.000}
\end{aligned}$$

$$\begin{aligned}
\text{Total persediaan} & = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\
& = \text{Rp. 625.000} + \text{Rp.0} + \text{Rp.176.900.000}
\end{aligned}$$

$$= \text{Rp.}177.525.000$$

- Oktober 2018

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 750 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 5.120 \times \text{Rp. } 50.000 = \text{Rp.}256.000.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp.}625.000 + \text{Rp.}0 + \text{Rp.}256.000.000$$

$$= \text{Rp.}256.625.000$$

- November 2018

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 750 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 6.167 \times \text{Rp. } 50.000 = \text{Rp.}308.350.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 625.000 + \text{Rp.}0 + \text{Rp.}308.350.000$$

$$= \text{Rp.}308.975.000$$

- Desember 2018

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 750 = \text{Rp. } 0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= .9.192 \times \text{Rp. } 50.000 = \text{Rp. } 459.600.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 625.000 + \text{Rp. } 0 + \text{Rp. } 459.600.000 \\ &= \text{Rp. } 460.225.000\end{aligned}$$

- Januari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 806 \times \text{Rp. } 750 = \text{Rp. } 604.500\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 7.098 \times \text{Rp. } 50.000 = \text{Rp. } 354.900.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 625.000 + \text{Rp. } 604.500 + \text{Rp. } 354.900.000 \\ &= \text{Rp. } 356.129.500\end{aligned}$$

- Februari 2019

$$\text{Biaya pemesanan} = \text{Tidak ada pemesanan} = \text{Rp. } 0$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 750 = \text{Rp. } 0\end{aligned}$$

Biaya Pembelian = Pembelian x harga beli

$$= 0 \times \text{Rp. } 50.000 = \text{Rp.}0$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 0 + \text{Rp.}0 + \text{Rp.}0$$

$$= \text{Rp.}0$$

- Maret 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 750 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 4.421 \times \text{Rp. } 50.000 = \text{Rp.}221.050.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp.}625.000 + \text{Rp.}0 + \text{Rp.}221.050.000$$

$$= \text{Rp.}221.675.000$$

- April 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 750 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 8.239 \times \text{Rp. } 50.000 = \text{Rp.}411.950.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 625.000 + \text{Rp.}0 + \text{Rp.}411.950.000$$

$$= \text{Rp.}412.575.000$$

- Mei 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 750 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 5.470 \times \text{Rp. } 50.000 = \text{Rp.}273.500.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp.}625.000 + \text{Rp.}0 + \text{Rp.}273.500.000$$

$$= \text{Rp.}274.125.000$$

- Juni 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 625.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 50.000 = \text{Rp. } 750$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 778 \times \text{Rp. } 750 = \text{Rp.}583.500$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 3.228 \times \text{Rp. } 50.000 = \text{Rp.}161.400.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 625.000 + \text{Rp.}583.500 + \text{Rp.}161.400.000$$

$$= \text{Rp.}162.608.500$$

- Juli 2019

Biaya pemesanan = Tidak ada pemesanan = Rp. 0

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan

= 0 x Rp. 750 = Rp.0

Biaya Pembelian = Pembelian x harga beli

= 0 x Rp. 50.000 = Rp. 0

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

= Rp. 0 + Rp.0 + Rp. 0

= Rp.0

- Agustus 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 625.000

Biaya simpan = 1,5% x Rp. 50.000 = Rp. 750

Biaya penyimpanan = Sisa x biaya simpan

= 0 x Rp. 750 = Rp.0

Biaya Pembelian = Pembelian x harga beli

= 6.505 x Rp. 50.000 = Rp.325.250.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

= Rp. 625.000 + Rp.0 + Rp.325.250.000

= Rp.325.875.000

➤ Bahan Baku Rokok (Cengkeh):

- September 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan

= 0 x Rp. 1.950 = Rp.0

Biaya Pembelian = Pembelian x harga beli

= 2.123 x Rp. 130.000 = Rp.275.990.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

= Rp. 275.000 + Rp.0+ Rp.275.990.000

= Rp.276.265.000

- Oktober 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan

= 0 x Rp. 1.950 = Rp.0

Biaya Pembelian = Pembelian x harga beli

= 3.072 x Rp. 130.000 = Rp.399.360.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

= Rp. 275.000 + Rp.0 + Rp.399.360.000

= Rp.399.635.000

- November 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 1.950 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 3.700 \times \text{Rp. } 130.000 = \text{Rp.}481.000.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}481.000.000 \\ &= \text{Rp.}481.275.000\end{aligned}$$

- Desember 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 1.950 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 5.515 \times \text{Rp. } 130.000 = \text{Rp.}716.950.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}716.950.000 \\ &= \text{Rp.}717.225.000\end{aligned}$$

- Januari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 1.950 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 3.775 \times \text{Rp. } 130.000 = \text{Rp.}490.750.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}490.750.000 \\ &= \text{Rp.}491.025.000\end{aligned}$$

- Februari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 1.950 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 483 \times \text{Rp. } 130.000 = \text{Rp.}62.790.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}62.790.000 \\ &= \text{Rp.}63.065.000\end{aligned}$$

- Maret 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 1.950 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 2.653 \times \text{Rp. } 130.000 = \text{Rp.}344.890.000\end{aligned}$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}344.890.000$$

$$= \text{Rp.}345.165.000$$

- April 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 1.950 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 4.944 \times \text{Rp. } 130.000 = \text{Rp.}642.720.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}642.720.000$$

$$= \text{Rp.}642.995.000$$

- Mei 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 275.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 130.000 = \text{Rp. } 1.950$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 1.950 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 3.282 \times \text{Rp. } 130.000 = \text{Rp.}426.660.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}426.660.000$$

$$= \text{Rp.}426.935.000$$

- Juni 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 0 x Rp. 1.950 = Rp.0

Biaya Pembelian = Pembelian x harga beli
= 1.470 x Rp. 130.000 = Rp.191.100.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.5.231.850 + Rp.191.100.000
= Rp.191.375.000

- Juli 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan
= 0 x Rp. 1.950 = Rp.0

Biaya Pembelian = Pembelian x harga beli
= 467 x Rp. 130.000 = Rp.60.710.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 275.000 + Rp.0 + Rp.60.710.000
= Rp.60.985.000

- Agustus 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 275.000

Biaya simpan = 1,5% x Rp. 130.000 = Rp. 1.950

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 1.950 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 3.903 \times \text{Rp. } 130.000 = \text{Rp.}507.390.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 275.000 + \text{Rp.}0 + \text{Rp.}507.390.000$$

$$= \text{Rp.}507.665.000$$

➤ Bahan Baku Rokok (Saos):

- September 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 3.330 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 92 \times \text{Rp. } 222.000 = \text{Rp.}20.424.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}0 + \text{Rp.}20.424.000$$

$$= \text{Rp.}20.549.000$$

- Oktober 2018

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 3.330 = \text{Rp.}0$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 133 \times \text{Rp. } 222.000 = \text{Rp.}29.526.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp.}0 + \text{Rp.}29.526.000 \\ &= \text{Rp.}29.651.000\end{aligned}$$

- November 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 3.330 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 160 \times \text{Rp. } 222.000 = \text{Rp.}35.520.000\end{aligned}$$

$$\begin{aligned}\text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp.}0 + \text{Rp.}35.520.000 \\ &= \text{Rp.}35.645.000\end{aligned}$$

- Desember 2018

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned}\text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 3.330 = \text{Rp.}0\end{aligned}$$

$$\begin{aligned}\text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 239 \times \text{Rp. } 222.000 = \text{Rp.}53.058.000\end{aligned}$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 125.000 + \text{Rp.}0 + \text{Rp.}53.058.000$$

$$= \text{Rp.}53.183.000$$

- Januari 2019

$$\text{Biaya pemesanan} = \text{Biaya } 1 \times \text{pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 21 \times \text{Rp. } 3.330 = \text{Rp.}69.930$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 185 \times \text{Rp. } 222.000 = \text{Rp.}41.070.000$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp. } 125.000 + \text{Rp.}69.930 + \text{Rp.}41.070.000$$

$$= \text{Rp.}41.264.930$$

- Februari 2019

$$\text{Biaya pemesanan} = \text{Tidak ada pemesanan} = \text{Rp.}0$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\text{Biaya penyimpanan} = \text{Sisa} \times \text{biaya simpan}$$

$$= 0 \times \text{Rp. } 3.330 = \text{Rp.}0$$

$$\text{Biaya Pembelian} = \text{Pembelian} \times \text{harga beli}$$

$$= 0 \times \text{Rp. } 222.000 = \text{Rp.}0$$

$$\text{Total persediaan} = \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian}$$

$$= \text{Rp.}0 + \text{Rp.}0 + \text{Rp.}0$$

$$= \text{Rp.}0$$

- Maret 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan
= 0 x Rp. 3.330 = Rp.0

Biaya Pembelian = Pembelian x harga beli
= 115 x Rp. 222.000 = Rp.25.530.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 125.000 + Rp.0 + Rp.25.530.000
= Rp.25.655.000

- April 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan
= 0 x Rp. 3.330 = Rp.0

Biaya Pembelian = Pembelian x harga beli
= 214 x Rp. 222.000 = Rp.47.508.000

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian
= Rp. 125.000 + Rp.0 + Rp.47.508.000
= Rp.47.633.000

- Mei 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 3.330 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 142 \times \text{Rp. } 222.000 = \text{Rp.}31.524.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}0 + \text{Rp.}31.524.000$$

$$= \text{Rp.}31.649.000$$

- Juni 2019

Biaya pemesanan = Biaya 1x pesan = Rp. 125.000

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 20 \times \text{Rp. } 3.330 = \text{Rp.}66.600$$

Biaya Pembelian = Pembelian x harga beli

$$= 84 \times \text{Rp. } 222.000 = \text{Rp.}18.648.000$$

Total persediaan = Biaya pemesanan + Biaya penyimpanan + Biaya pembelian

$$= \text{Rp. } 125.000 + \text{Rp.}66.600 + \text{Rp.}18.648.000$$

$$= \text{Rp.}18.839.600$$

- Juli 2019

Biaya pemesanan = Tidak ada pemesanan = Rp.0

Biaya simpan = 1,5% x Rp. 222.000 = Rp. 3.330

Biaya penyimpanan = Sisa x biaya simpan

$$= 0 \times \text{Rp. } 3.330 = \text{Rp.}0$$

Biaya Pembelian = Pembelian x harga beli

$$= 0 \times \text{Rp. } 222.000 = \text{Rp.0}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp.0} + \text{Rp.0} + \text{Rp.0} \\ &= \text{Rp.0} \end{aligned}$$

- Agustus 2019

$$\text{Biaya pemesanan} = \text{Biaya 1x pesan} = \text{Rp. } 125.000$$

$$\text{Biaya simpan} = 1,5\% \times \text{Rp. } 222.000 = \text{Rp. } 3.330$$

$$\begin{aligned} \text{Biaya penyimpanan} &= \text{Sisa} \times \text{biaya simpan} \\ &= 0 \times \text{Rp. } 3.330 = \text{Rp.0} \end{aligned}$$

$$\begin{aligned} \text{Biaya Pembelian} &= \text{Pembelian} \times \text{harga beli} \\ &= 169 \times \text{Rp. } 222.000 = \text{Rp.37.518.000} \end{aligned}$$

$$\begin{aligned} \text{Total persediaan} &= \text{Biaya pemesanan} + \text{Biaya penyimpanan} + \text{Biaya pembelian} \\ &= \text{Rp. } 125.000 + \text{Rp.0} + \text{Rp.37.518.000} \\ &= \text{Rp.37.643.000} \end{aligned}$$