

$$\begin{aligned} \text{period} &= 80,000 + 100,000 \\ &= 180,000 \end{aligned}$$

2)

D, v
 D/v J.F
 S/F
 D/v
 J/v

3)

COGS

direct material		
beg. inventory inventory	335,000	
purchase	356,000	
direct material available	581,000	
End. Inventory	212,000	
direct material used		369,000
direct manufacturing labor		375,000
Indirect manufacturing labor		
Indirect material used	79,000	
Indirect manufacturing labor	300,000 ³³⁵	
property taxes - plant	45,500	
depreciate	20,000	
Miscellaneous	118,000	
plant utilities	86,300	
Total OH		689,800
Manufacturing incurred		103,3800

Add: beg WIP	120,000
Total manufacturing to account for	1,554,000
deduct end. WIP	195,000
COGM	1,359,000

4)

$$1) \quad VC/U = \frac{TVC}{Q} = \frac{4300,000}{1900,000} = \frac{7}{2} = \$3.5/\text{unit}$$

$$FC/U = \frac{TFC}{Q} = \frac{3400,000}{1900,000} = \$2/\text{unit}$$

$$\text{Average cost} = \frac{11}{2} = \$5.5/\text{unit}$$

$$2) \quad TC = (1500,000 \times 3.5) + 2,400,000 \\ = 7,650,000$$

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$$3) \quad TC = (900,000 \times 3.5) + 2,400,000 \\ = 5,550,000$$

$$\text{Avg} = \frac{5550,000}{900,000} = \$6.17/\text{unit}$$

$$4) \quad \text{FC} = 2,400,000$$

5)

$$\begin{aligned}
 a) \text{ CM} &= \text{TR} - \text{TV} \\
 &= (30 \times 1800,000) - 91,600,000 \\
 &= 32,400,000
 \end{aligned}$$

$$\begin{aligned}
 \text{CMU} &= \text{SP} - \text{VC} \\
 &= 30 - (91,600,000 : 1800,000) \\
 &= 30 - 19 \\
 &= 18
 \end{aligned}$$

$$\text{CM\%} = \frac{32,400,000}{54,000,000} = 60\%$$

$$\text{VC\%} = \frac{21,600,000}{54,000,000} = 40\%$$

$$\begin{aligned}
 b) \text{ BE U} &= \frac{\text{FC}}{\text{CMU}} = \frac{5,760,000}{18} \\
 &= 320,000 \text{ units}
 \end{aligned}$$

$$\begin{aligned}
 \text{BE \$} &= \text{BE U} \times \text{SPU} \\
 &= 320,000 \times 30 \\
 &= 9,600,000
 \end{aligned}$$

$$\begin{aligned}
 c) \text{ MOS} &= \text{unit sold} - \text{BE U} = 1800,000 - 320,000 \\
 \text{MOS\%} &= \frac{464,000,000}{54,000,000} = 82,22\%
 \end{aligned}$$

$$\begin{aligned}
 \text{MOS \$} &= \text{TR} - \text{BE} \\
 &= 44,000,000
 \end{aligned}$$

a) direct		
Beg. Inventory	80,000	
purchases	246,400	
material available to use	326,400	
End Inventory	41,600	
direct material used		284,800 ✓

b) direct	direct material used	284,800
	Manufacturing overhead	48,000
	direct labor	64,000
	Beginning WIP	3,900
	deduct end WIP	(16,000)
	② COG-M =	384,000 ✓

c) $COGS = 384,000 + 96,000 - 64,000 = 416,000$ ✓

d) prime cost = direct material used + direct manufacturing labor
 $= 284,800 + 64,000$
 $= 348,800$

e) conversion cost = direct manufacturing labor + MOH
 $= 64,000 + 48,000$
 $= 112,000$

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f) Inventory cost = direct labor used + direct material used
 $= 64,000 + 284,800 + 48,000$ + MOH
 $= 396,800$

b)

$$\text{UCR}(X) = 36 - 28 = 8 \text{ /unit}$$

$$\text{UCR}(Y) = 24 - 15 = 9 \text{ /unit}$$

$$\text{weighted UCR} = \left(8 \times \frac{3}{4}\right) + \left(9 \times \frac{1}{4}\right)$$
$$= 8.25 \text{ /unit}$$

$$QBE = \frac{834,000}{9} = 92,666.67 \text{ unit}$$

$$X \rightarrow 92,666.67 \times 75\% = 69,500 \text{ unit}$$

$$Y \rightarrow 92,666.67 \times 25\% = 23,166.67 \text{ unit}$$

c)

$$QBE = 480,000 - 340,000 = 140,000$$

$$QBE = 140,000 - 85,000 = 55,000$$

$$QBE = \frac{140,000}{69,000} = 2.03$$

The price will be increased by 2.03

$$2.03 \times 4\% = 0.0812$$

The price will be increased by 0.0812