

SOLUTION 4.1

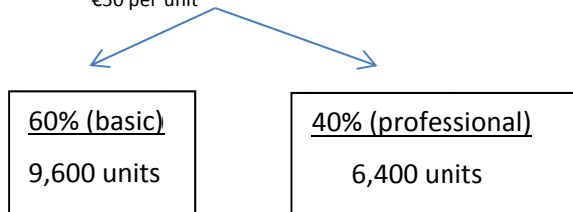
1)

$$\text{Total Break-even point} = \frac{\text{Fixed costs}}{\text{Weighted-average budgeted contribution margin}}$$

$$\text{Weighted-average contribution margin} = (45 - 15) \times \frac{24,000}{40,000} + (120 - 40) \times \frac{16,000}{40,000} =$$

$$= (30 \times 0.6) + (80 \times 0.4) = 50$$

$$\text{Total Break-even point} = \frac{\text{€800,000 per year}}{\text{€50 per unit}} = 16,000 \text{ units per year}$$



2)

$$\text{Weighted-average contribution margin} = (45 - 15) \times \frac{32,000}{40,000} + (120 - 40) \times \frac{8,000}{40,000} =$$

$$= (30 \times 0.8) + (80 \times 0.2) = 40$$

$$\text{Total Break-even point} = \frac{\text{€800,000 per year}}{\text{€40 per unit}} = 20,000 \text{ units per year}$$

