

SOLUTION 2.1

1) Financial year 2015:

$$AVC = \frac{TVC}{Q} = \frac{L \times w}{AP \times L} = \frac{w}{AP}$$

$$w = \frac{€1,300}{160 \text{ hours}} = €8.125 \text{ per hour}$$

$$AP = \frac{1,000 \text{ units}}{160 \text{ hours}} = 6.25 \text{ units per hour}$$

$$AVC = \frac{€8.125 \text{ per hour}}{6.25 \text{ units per hour}} = €1.30 \text{ per unit}$$

2) Financial year 2016 (if the employee manages to pack 1,200 units per month and receives €2,160 per month):

$$w = \frac{€2,160}{160 \text{ hours}} = €13.50 \text{ per hour}$$

$$AP = \frac{1,200 \text{ units}}{160 \text{ hours}} = 7.50 \text{ units per hour}$$

$$AVC = \frac{€13.50 \text{ per hour}}{7.50 \text{ units per hour}} = €1.80 \text{ per unit} > 1.30$$

3) Financial year 2016 (if the company pays the value of the time saved by the employee):

Average variable cost must not change:

$$€1.30 \text{ per unit} = \frac{LC / 160}{7.50}$$

$$LC = €1,560 \text{ (€600 per month + €0.80 per packed unit)}$$

