

## 10. Estimating and Calculating Profit

### 1. Missing words

Profit is the value of sales minus the total \_\_\_\_\_ incurred in generating those sales. Revenue is the total value of sales in a given time period and can be calculated by the formula: Price x \_\_\_\_\_. Total costs comprise the fixed overheads plus the total variable costs. These must be deducted from \_\_\_\_\_ to give \_\_\_\_\_. For new small firms, the big problem is estimating revenue, as the level of \_\_\_\_\_ will be uncertain.

**HINTS:** revenue, profit, demand, costs, quantity sold

### 2. Calculations 1.

2.1 If a firm sells 400 burgers at £3.20 per unit, and 50 burger meals at £5 each, what is its total revenue?

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2.2 If each burger costs £1.20 to make and each meal costs £1.50 to make, what are the total variable costs?

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2.3 If fixed costs are £400, what profit is the business making?

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### 3. Explain exactly how the following changes might affect profit

3.1 A firm in a highly competitive industry increases its prices by 10% \_\_\_\_\_

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3.2 The demand for a hat firm's tennis caps falls by 25% due to changing fashions. \_\_\_\_\_

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3.3 A new restaurant anticipating weekly sales of £8,000 achieves only £5,000. \_\_\_\_\_

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### 4. Profit. True or false?

4.1 Increasing the price of a product will increase the profit made by that business

4.2 Profit is calculated by the formula: Total revenue – total costs

4.3 If total costs exceed total revenue, the firm will make a loss

4.4 Increasing advertising will result in an increase in profit

### 5. Calculations 2

5.1 Jeff's Jukeboxes Ltd has sales of 500 units a month, a price of £1,000, fixed costs of £120,000 and variable costs of £700 per unit. Calculate its profit.

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5.2 At full capacity of 24,000, a firm's costs are as follows:

Salaries of management	£48,000	Materials	£12,000
Rent and rates	£24,000	Piece-rate labour	£36,000

a) What are the firm's total costs at 20,000 units? \_\_\_\_\_

b) What profit will be made at 20,000 units if the selling price is £6?

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## 10. ANSWERS – Profit

1. revenue ... costs... profit ... quantity sold ... demand (or sales)

### 2. Calculations 1

2.1  $£1280 + £250 = £1530$

2.2  $(£1.20 \times 400 = £480) + (£1.50 \times 50 = £75) = £555$

2.3  $£1530 - £555 - £400 = £575$

### 3. Explain exactly how the following changes might affect profit

3.1 In a competitive industry it is likely that PED is elastic and therefore the price increase will result in a larger fall in sales so revenue will fall. However the profit margin will increase as the price increases so the profit may not fall with revenue.

3.2 As demand falls, revenue will fall thus making it more difficult for the firm to cover its costs and thus profit is likely to fall.

3.3 Many of the costs of running a restaurant are fixed, especially the rent and (largely) the salary bill. Therefore the revenue shortfall is likely to make a serious dent in the profits of the business, possibly dragging it below its break-even revenue level.

### 4. Profit. True or false?

4.1 False

4.2 True

4.3 True

4.4 False – this is a common mistake made by students. Advertising is expensive and although it may increase demand, this does not mean it increases profit. Profit only increases if the extra revenue created is larger than the extra cost incurred.

### 5. Calculations 2

5.1 Revenue =  $500 \times £1000 = £500,000$

Variable costs =  $500 \times £700 = £350,000$

Total costs =  $£350,000 + £120,000 = £470,000$

Profit =  $£500,000 - £470,000 = £30,000$

5.2 a) Fixed cost =  $£48,000 + £24,000 = £72,000$  Variable costs =  $£48,000/24 \times 20 = £40,000$

Total costs =  $£112,000$

B) Revenue =  $20,000 \times £6 = £120,000$

Profit =  $£120,000 - £112,000 = £8,000$