

Calculating Costs

Total Costs are the total amount of money spent running a business over a certain period of time. Total costs can be broken down into fixed and variable costs.

Fixed costs are costs which do not change with the number of items sold or produced.

Variable costs are costs which vary according to the number of items sold or produced.

$$\text{Total Costs} = \text{Fixed Costs} + \text{Variable Costs}$$

1. Shaun is a chef. He has bought an old building and is converting it into a stylish Indian restaurant. He will have several costs.
 - a Some of Shaun's costs are shown in the table below. Identify which of them are start-up costs and which will be running costs by putting a cross (X) in the correct column.

	Start-up cost	Running cost
Buying kitchen equipment	X	
Hiring a decorator to paint the interior of the restaurant	X	
Advertising the <u>opening</u> of the restaurant	X	
Paying business rates		X
Having menus printed	X	
Buying spices, flour and other dry ingredients for the restaurant food		X

2. Laura and Markus rent a small unit on an industrial estate. They use this space as a workshop where they make wooden furniture. Their business has both fixed and variable costs.
 - a Some of their costs are listed in the table below. Identify which of them are fixed costs and which are variable costs by putting a cross (X) in the correct column.

	Fixed cost	Variable cost
Electricity	X	
Wood to make the furniture		X
Varnish to protect the furniture		X
Tools and equipment	X	
Insurance	X	
Staff wages	XXXX	X

Salary - FC
WAGES - VC
Also operating cost.

3. Last month, Laura calculated that their variable costs were £40 for each item they sold. Their fixed costs were £6,000.

(a) What would their variable costs be if they sold 200 items?

$$40 \times 200 = 8000$$

(b) What would their variable costs be if they sold 300 items?

$$40 \times 300 = 12000$$

(c) What would their fixed costs be if they sold 300 items?

£6,000

4. Use the formula to calculate the total costs of the business for a year if the fixed costs per month are £1000 and the total variable costs per month are £2000.

$$1000 + 2000 = 3000 \times 12 = 36000$$

5. Tom has two bills to pay. The first is for 40 small jewellery boxes. The second is for his internet connection. Which of these is a variable cost and which is a fixed cost?

Jewellery boxes = VC
Internet connection = FC

6. The following lists gives some of the fixed costs for a small business. Add the amounts together to calculate the total.

(a) Business rates	£1500
(b) Heating	£800
(c) Telephone	£500
(d) Insurance	£1000
(e) Car hire	£2000
(f) Staff wages	£20000 +

25,800

7. Complete the table below by calculating the total variable costs

No. of units produced	Variable cost per unit	Total variable cost
100	50p	50
250	£1.00	250
375	25p	93.75
500	£1.30	650
623	£2.00	1246
57	£50.00	2850
1374	£15.23	20,926.02

8. 20 cars need to be produced. The fixed costs for the full 20 cars will be £50,000 the variable cost per unit for each car is £75. What will the total costs be for all 20 cars?

$$20 \times 75 = 1,500 + 50,000 = £51,500$$