

Case study Jeffers Garden Designs

During a long hot summer Marion Jeffers noticed that the garden furniture she bought the last year had faded badly. She decided she could do better. So she set up in business making her own furniture designs and selling them to garden centres and retailers in Wiltshire. She drew up a business plan, which included a schedule of her costs and a break-even chart. These are shown in Table 41.1 and Figure 41.8. Marion aimed to break-even in the first year. She knew that covering her fixed and variable costs would be a challenge. However, Marion felt she could charge £200 for a furniture set which included folding wooden chairs, a table and umbrella. She could also avoid renting or buying premises by converting an unused barn on her land into a workshop.

Table 41.1 Marion Jeffers' fixed and variable costs

Fixed costs	£
Machinery	2,600
Tools & equipment	2,200
Van	2,100
Barn conversion costs	2,300
Other fixed costs	800
Total	10,000
Variable costs	£
Labour	60
Wood	20
Canvass	10
Metal fittings and screws	5
Other variable costs	5
Total	100

- (a) Using the example in the case explain what is meant by break-even. (5 marks)
- (b) Marion's business plan also included a table to show how much profit/loss she would make at different levels of output. This is shown in Table 41.2, but it is incomplete. Using the break-even chart in Figure 41.8 complete Table 41.2. (7 marks)

Table 41.2

No. of sets	40	80	100	120	160
Total revenue					
Total cost					
Profit/loss					

- (c) (i) In the first year of trading Marion produced and sold 140 garden sets. State the margin of safety and explain what it means. (6 marks)
- (ii) Calculate the profit at this level of output. (2 marks)
- (d) In the second year the fixed costs for the business fell to £6,000.
- (i) Calculate how many garden sets the business would need to produce and sell to break-even in the second year of trading (assume that price and variable costs remain the same). (8 marks)
- (ii) In the second year Marion's business produced and sold 120 garden sets. Calculate the profit made by the business. (6 marks)
- (e) Discuss the problems Marion may have encountered when using break-even analysis. (8 marks)

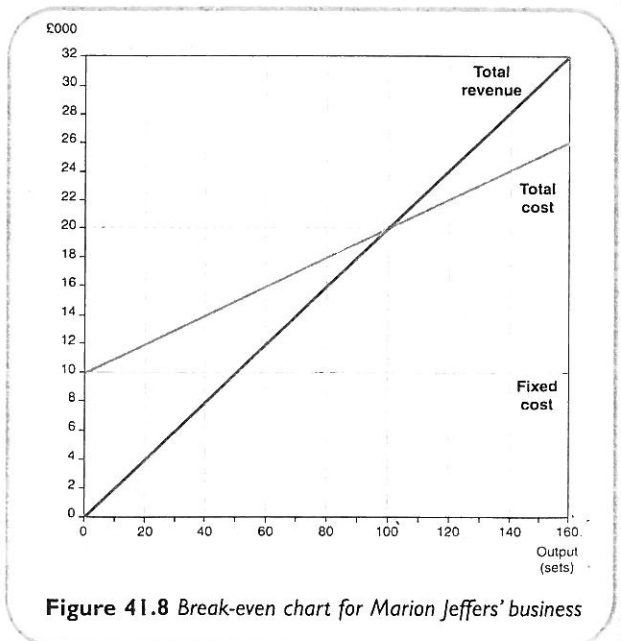


Figure 41.8 Break-even chart for Marion Jeffers' business