Proportion and Best Buys

Grade 3 topic · Foundation and Higher · Edexcel and AQA

How to use this pack
20 questions that get harder as you go. Foundation students: aim for Questions 1–15 (44 marks) and have a go at the rest. Higher students: complete all 20. Show your working on the lines and write your final answer on the answer line, then mark yourself with the answers at the back. Diagrams are not drawn accurately. Total: 65 marks.

Warm-up

1 6 pens cost £2.10. Work out the cost of 12 pens. **[2 marks]**

Answer _____

2 7 notebooks cost £3.50. Work out the cost of 1 notebook. **[2 marks]**

Answer _____

3 5 pens cost £2.25. Work out the cost of 10 pens. **[2 marks]**

Answer _____

4 8 notebooks cost £6.40. Work out the cost of 1 notebook. **[2 marks]**

Answer _____

5 7 pens cost £1.40. Work out the cost of 35 pens. **[2 marks]**

Answer _____

Core

6 A recipe for 6 people uses 150 g of flour. How much flour is needed for 14 people? **[3 marks]**

Answer _____

7 A recipe for 3 people uses 250 g of flour. How much flour is needed for 8 people? **[3 marks]**

Answer _____

8 A recipe for 8 people uses 200 g of flour. How much flour is needed for 18 people? **[3 marks]**

Answer _____

9 4 workers take 8 days to build a wall. How many days would 8 workers take, working at the same rate? **[3 marks]**

Answer _____

10 Paint costs £18 for 3 litres. Work out the cost of 5 litres. **[3 marks]**

Answer _____

Stretch

11 A 250 g jar of jam costs £1.10. A 750 g jar costs £2.85. Which is better value? You must show your working. **[4 marks]**

Answer _____

12 A 250 g jar of jam costs £1.10. A 600 g jar costs £2.10. Which is better value? You must show your working. **[4 marks]**

Answer _____

13 A 500 g jar of jam costs £1.85. A 750 g jar costs £2.85. Which is better value? You must show your working. **[4 marks]**

Answer _____

14 y is directly proportional to x. When x = 4, y = 10. Work out y when x = 14. **[3 marks]**

Answer _____

15 8 taps fill a tank in 6 hours. How long would 12 taps take? **[4 marks]**

Answer _____

Challenge

16 Shop A sells 6 cans of cola for £3.30. Shop B sells 10 cans for £5.40. Which shop sells cola at the lower price per can, and by how much per can? **[4 marks]**

Answer _____

17 A car uses 8 litres of petrol to travel 100 km. How far can it travel on 30 litres? **[4 marks]**

Answer _____

18 It takes 5 people 9 hours to paint a fence. Another job needs 3 people. How many hours would it take them, at the same rate? **[4 marks]**

Answer _____

19 A recipe uses 300 g of sugar for 12 cakes. Mia has 1.2 kg of sugar. How many cakes can she make? **[4 marks]**

Answer _____

20 Pack X: 12 pencils for £3.00. Pack Y: 20 pencils for £4.60. Which is better value? **[5 marks]**

Answer _____