FOUNDATION & HIGHER

SAME AT BOTH TIERS

Name ..... Class .....

R7: Proportion

Solve problems using proportion

20 marks · 25 minutes · Non-calculator

1) A recipe uses 4 eggs and 250 g of flour to make 12 cakes. Sam has 9 eggs and 500 g of flour. What is the greatest number of cakes he can make?

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[Question 1: 3 marks]

2) 8 workers can finish a job in 15 days. After 5 days, 2 more workers join them. How many days does the whole job take?

..... days

[Question 2: 4 marks]

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3) A car travels 270 km on 18 litres of fuel. Fuel costs £1.50 per litre. Find the cost of fuel for a 450 km journey.

£ .....

[Question 3: 3 marks]

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4) On a map, 3 cm represents 7.5 km. Two towns are 40 km apart. How far apart are they on the map?

..... cm

[Question 4: 2 marks]

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5) A pack of 6 rolls costs £4.20. A pack of 10 costs £6.80. Which is better value?

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[Question 5: 2 marks]

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6) Ella changes £400 into euros at £1 = 1.15 euros. She spends 320 euros, then changes the rest back at £1 = 1.20 euros. How many pounds does she get back?

£ .....

[Question 6: 3 marks]

7) A drink is made with 3 parts water to 1 part juice. Jo has 400 ml of juice and 1 litre of water. What is the largest volume of drink she can make?

..... ml

[Question 7: 3 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	24	Eggs allow 27, flour allows 24 (P1, P1); 24 (A1).
2	13	120 worker-days (P1); 80 left after 5 days (P1); 80 ÷ 10 = 8 (P1); 13 (A1).
3	£45	15 km per litre (P1); 30 litres (P1); A1.
4	16	2.5 km per cm (P1); A1.
5	Pack of 10	70p and 68p each (P1); A1.
6	£116.67	460 euros (P1); 140 left (P1); 140 ÷ 1.2 (A1).
7	1333	Water limits: juice $\frac{1000}{3}$ (P1, P1); A1.