FOUNDATION & HIGHER

SAME AT BOTH TIERS

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

R1: Units in context

Solve problems involving standard and compound units

20 marks · 25 minutes · Non-calculator

1) A pool measures 8 m by 5 m and is 1.5 m deep. A hose delivers 40 litres per minute. How many hours does it take to fill the pool? (1 m^3 = 1000 litres)

..... hours

[Question 1: 3 marks]

2) Ella is paid £9.60 per hour. She works 7 hours 30 minutes a day, 5 days a week. Find her weekly pay and her pay in pence per minute.

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[Question 2: 3 marks]

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3) One litre of paint covers 12 m^2. A wall is 4.5 m by 2.4 m and needs two coats. Paint comes in 2.5-litre tins. How many tins are needed?

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[Question 3: 3 marks]

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4) A car uses 6.5 litres of fuel per 100 km. Its tank holds 52 litres. How far can it travel on a full tank?

..... km

[Question 4: 2 marks]

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5) Gold has a density of 19.3 g/cm^3. A gold bar measures 10 cm by 4 cm by 2 cm. Gold is worth £50 per gram. Find the value of the bar.

£ .....

[Question 5: 3 marks]

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6) Carpet costs £24 per m^2. A room measures 360 cm by 450 cm. Find the cost of carpeting the room.

£ .....

[Question 6: 3 marks]

7) A car travels at 90 km/h. How many metres does it travel in 12 seconds?

..... m

[Question 7: 3 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	25	60 m^3 = 60 000 litres (P1); 1500 minutes (P1); 25 hours (A1).
2	£360; 16p	9.60 × 37.5 (P1); £360 (A1); 960 ÷ 60 (A1).
3	1	Area 2 × 10.8 = 21.6 (P1); 1.8 litres (P1); 1 tin (A1).
4	800	52 ÷ 6.5 × 100 (P1); A1.
5	£77 200	Volume 80 cm^3 (P1); mass 1544 g (P1); A1.
6	£388.80	Area 16.2 m^2 (P1, P1); A1.
7	300	25 m/s (P1, P1); A1.