FOUNDATION & HIGHER

SAME AT BOTH TIERS

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

N2: Calculating in context

Solve problems using the four operations with integers, decimals and fractions

20 marks · 25 minutes · Non-calculator

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1) Each room needs $4\frac{3}{4}$ litres of paint. Sam has 3 tins, each holding 5 litres. How many rooms can he paint completely, and how much paint is left over?

.....

[Question 1: 3 marks]

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2) 28 people go to a party. Each person eats $2\frac{1}{2}$ slices of pizza. Each pizza is cut into 8 slices. How many pizzas must be bought?

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[Question 2: 3 marks]

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3) Ali buys 3 notebooks at £1.85 each and some pens at 65p each. He spends £8.15 altogether. How many pens does he buy?

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[Question 3: 3 marks]

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4) A ribbon 12.6 m long is cut into pieces 0.45 m long. How many pieces are there?

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[Question 4: 2 marks]

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5) An adult train ticket costs £24.60 and a child ticket costs half as much. A family of 2 adults and 3 children gets $\frac{1}{3}$ off the total cost. How much do they pay?

£ .....

[Question 5: 4 marks]

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6) A tank is $\frac{2}{5}$ full. After 18 litres are added, it is $\frac{7}{10}$ full. How many litres does the tank hold when full?

..... litres

[Question 6: 3 marks]

7) At midnight the temperature is 4.6 °C. It falls by 1.8 °C every hour for 5 hours. What is the temperature at 5 am?

..... °C

[Question 7: 2 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	3 rooms, 0.75 litres	15 litres total (P1); $15 \div 4.75 = 3.1\ldots$ (P1); 3 rooms with 0.75 litres left (A1).
2	9	$28 \times 2.5 = 70$ slices (P1); $70 \div 8 = 8.75$ (P1); 9 (A1).
3	4	$3 \times 1.85 = 5.55$ (P1); $8.15 - 5.55 = 2.60$ (P1); $2.60 \div 0.65 = 4$ (A1).
4	28	$12.6 \div 0.45$ (P1); A1.
5	£57.40	Child £12.30 (P1); total £86.10 (P1); $\times \frac{2}{3}$ (P1); A1.
6	60	$\frac{7}{10} - \frac{2}{5} = \frac{3}{10}$ (P1); $\frac{3}{10}$ of the tank = 18 (P1); 60 (A1).
7	-4.4	$1.8 \times 5 = 9$ (P1); $4.6 - 9$ (A1).