FOUNDATION & HIGHER

SAME AT BOTH TIERS

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

N1: Ordering numbers

Solve problems involving ordering integers, decimals and fractions

20 marks · 25 minutes · Non-calculator

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1) The temperatures on five days were: Monday $-3\,°C$, Tuesday $2\,°C$, Wednesday $-7\,°C$, Thursday $t\,°C$ and Friday $4\,°C$. The median temperature was $-1\,°C$. Find Thursday's temperature and the range of the five temperatures.

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[Question 1: 3 marks]

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2) Which of these is closest to 0.4? $\frac{5}{12}$, $\frac{3}{7}$, 0.42, 41% Show your working.

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[Question 2: 3 marks]

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3) a and b are integers with $-4 < a < b < -1$ and $a + b = -5$. Find a and b.

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[Question 3: 3 marks]

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4) Rice is sold in three sizes: 2.5 kg for £3.40, 750 g for £1.05 and 1.2 kg for £1.62. Put the sizes in order of value for money, best first.

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[Question 4: 4 marks]

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5) Find a fraction with denominator 200 that lies between 0.36 and $\frac{3}{8}$.

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[Question 5: 2 marks]

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6) A diver is 12.5 m below the surface. She rises 4.8 m and then descends 7.6 m. How far below her starting depth is she now?

..... m

[Question 6: 3 marks]

7) n is an even integer and $-10 < 3n - 1 \leqslant 8$. Find all the possible values of n.

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[Question 7: 2 marks]

End of paper – 20 marks in total

Answers and brief mark scheme

Q	Answer	Method / notes
1	$t = -1$; range 11	Median is the 3rd value, so t lies between -3 and 2 (P1); $t = -1$ (A1); range $4 - (-7) = 11$ (A1).
2	41%	Converts all to decimals 0.417, 0.429, 0.42, 0.41 (P1, P1); 41% (A1).
3	$a = -3$, $b = -2$	Lists integers -3 and -2 (P1); checks sum (P1); A1.
4	1.2 kg, 2.5 kg, 750 g	Finds price per kg for one size (P1); all three: 1.35, 1.36, 1.40 (P1, A1); correct order (C1).
5	e.g. $\frac{73}{200}$	$0.36 = \frac{72}{200}$ and $\frac{3}{8} = \frac{75}{200}$ (P1); 73 or 74 (A1).
6	2.8	$-12.5 + 4.8 - 7.6 = -15.3$ (P1, A1); $15.3 - 12.5 = 2.8$ (A1).
7	$-2, 0, 2$	$-3 < n \leqslant 3$ (P1); even values (A1).