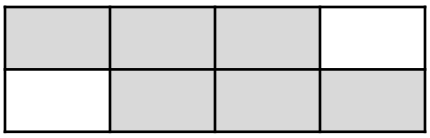
Autumn mark scheme

Year 5 – Reasoning & problem solving

General marking principles

- Answers should be single values in their simplest form unless the mark scheme says otherwise
- Accept reversed digits provided intention is clear e.g. a reversed 2 must clearly show the characteristics of a 2 rather than a 5
- Do not award the mark if more than one answer is given
- For numbers with four or more digits, accept answers with a comma positioned incorrectly or without a comma. Do not accept a decimal point or an apostrophe.

Question	Answer	Marks	Notes and guidance
1	2,537	1	
	Two thousand, five hundred and thirty-seven	1	Condone misspelling if intention is clear.
2	Indicates 6,050	1	Accept any clear indication
3	185 – 120 = 65 120 = 185 – 65	1	Both needed.
4	e.g. 	1	Accept any six squares shaded e.g. five full squares and two half squares.
5	48	1	
	12	1	Accept in either order.
6	Completes calculations correctly in two different ways e.g. • 800 and 12 • 700 and 112 • 500 and 312 • 810 and 2 etc.	2	Accept any two different pairs of numbers that add up to 812 Do not accept same answer reversed (e.g. 800 and 12 and then 12 and 800) for 2 marks Award 1 mark for one correct pair

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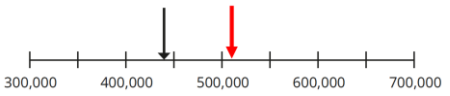
7	e.g. 440,000	1	Accept 435,000 to 445,000
	e.g. 	1	Any clear indication of 505,000 e.g. cross just after the 500,000 mark
8	350 is 40 more than 310	1	
	1,427 is 40 more than 1,387	1	
9	Completes table with 148,000 15,000 1,000	2	Award 1 mark for two correct entries.
10	$2\frac{\square 3}{7} = \frac{17}{7}$	1	
11	9,407	2	Award 1 mark for two correct method to subtract 88,134 from 97,541 with no more than one arithmetic error.
12		1	All three entries must be correct
	e.g. "Multiples of 4 have 1, 2 and 4 as factors and primes only have two factors"	1	Accept any clear explanation.

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Question	Answer	Marks	Notes and guidance
13	Indicates $\frac{7}{12}$ and gives a correct reason e.g. • $\frac{7}{12}$ is more than a half but $\frac{2}{5}$ is less than a half • $\frac{7}{12} = \frac{35}{60}, \frac{2}{5} = \frac{24}{60}$ and 35 > 24	1	
14	Completes the sequence with 503,000 and 463,000	1	Both numbers needed. Ignore any other numbers beyond these at either end of the sequence.
15	$\frac{6}{9}$ or $\frac{4}{6}$	2	Fractions may be given in either order. Award 1 mark for one fraction correct.
16	64, 81, 100, 121, 144	2	Award 1 mark for at least three correct square numbers and no extras.
17	$5\frac{1}{10}$	2	Accept equivalent fractions or exact decimal i.e. 5.1 Condone kg added to answer Award 1 mark for correct method to add $3\frac{2}{5}$ and $1\frac{3}{4}$ with no more than one arithmetic error or 5,100 seen
18	2,221	2	Award 1 mark for correct method with no more than one arithmetic error e.g. attempt to subtract 1,200 from 5,642 and divide the result by 2

Total : 30 marks