Year 6 – 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	7,000,000	1	Award the mark for any clear indication. Do not award mark if more than one answer has been indicated.
2	11,929	1	
3	56	1	
4	25	1	
	20	1	
5	500 m 0.5 m 15 mm 0.5 km 5 m 1.5 cm 500 mm 500 cm	3	Award 3 marks for all correct. Award 2 marks for two correct matches. Award 1 mark for one correct match.
6	27 18	2	Award 1 mark for fully correct method with no more than one arithmetic error.
7	19	1	



Year 6 – Reasoning & problem solving

Question	Answer	Marks	Notes and guidance
8	Indicates 4.71 and 4.68	1	Award any clear indication. Both numbers needed. Do not award mark if an incorrect answer has been indicated.
	4.65	1	
9	input output $6,000 \rightarrow + + 4 \rightarrow 12,004$ $8 \rightarrow + 2 \rightarrow + 4 \rightarrow 20$	2	Award 1 mark for each correct answer.
10	Indicates Tommy and gives a valid reason e.g. • Alex has walked 8.5 km and Tommy has walked 9 km • $\frac{9}{10} = 90\%$ and is greater than 85% • 15% is more than 10% which is $\frac{1}{10}$	1	Do not award the mark if no reason, or incomplete reason, is given.
11	3	2	Award 1 mark for recognising the total number of children who come by bus or cycle is 9
12	2 4	2	Award 1 mark for fully correct method with no more than one arithmetic error OR one correct value seen OR correct method seen but values interchanged.



Year 6 – Reasoning & problem solving

Question	Answer	Marks	Notes and guidance
13	0.75 0.17 17%	3	Award 1 mark for each correct answer.
14	16	1	
15	16	2	Award 1 mark for fully correct method with no more than one arithmetic error.
16	375	2	Award 1 mark for fully correct method with no more than one arithmetic error.
17	Chooses = and gives a valid reason e.g. • 60% of £30 = £18 and 30% of £60 = £18 • $\frac{60}{100} \times 30 = \frac{30}{100} \times 60$	1	Do not award mark if no reason, or incomplete reason, is given.
18	11	2	Award 1 mark for fully correct method with no more than one arithmetic error.
19	6.35	2	Award 1 mark for fully correct method with no more than one arithmetic error.
20	45	2	Award 1 mark for fully correct method with no more than one arithmetic error.

Total: 35 marks