11+ Practice Test Answers
11+ Maths Test 30

Question	Answer	Explanation	Marks
1	Irregular heptagon	This is a heptagon (7-sided shape) because it has 7 exterior angles that correctly sum to 360° (40° + 72° + 40° + 45° + 52° + 40° + 71° = 360°). Since the number of exterior angles of a polygon always equals its number of sides, and we have 7 angles here, this confirms the shape is a heptagon.	1
2	6y	Let's substitute $y = 3$ into each expression to see which one does not equal 21. $6y = 6 × 3 = 18$ $3y + 12 = (3 × 3) + 12 = 9 + 12 = 21$ $y(2 + 5) = 3(7) = 3 × 7 = 21$ $3(y + 4) = 3(3 + 4) = 3 × 7 = 21$ The expression that does not equal 21 when $y = 3$ is 6y. Therefore, this cannot be Amelia's expression.	1
3	40.7 cm	To find the total length of the assembled rocket, we need to add the lengths of the individual components: Nose cone length: 12.6 cm Body tube length: 18.4 cm Engine mount length: 9.7 cm 12.6 cm + 18.4 cm + 9.7 cm = 40.7 cm Therefore, the total length of the assembled rocket will be 40.7 cm.	1
4	6 750	To find the total number of exercise books needed, we need to multiply the number of students by the number of exercise books each student requires per term. Number of students: 2 250 Exercise books per student per term: 3 2 250 × 3 = 6 750 Therefore, the total number of exercise books needed for all the students in one term is 6 750.	1
5	3 cm	To find the height of each can, we need to divide the total height of the stack by the number of cans. The total height of the stack is 36 cm, and there are 12 cans in the stack. 36 cm ÷ 12 = 3 cm Therefore, each individual can is 3 cm tall.	1

6	0	To find out how many toys will be left over, we need to calculate how many toys will go into each party bag and then subtract the total number of toys in the bags from the total number of toys Liam has. 180 toys ÷ 12 bags = 15 toys per bag 15 toys per bag × 12 bags = 180 toys 180 toys - 180 toys in bags = 0 toys left over Therefore, if Liam puts an equal number of toys in each of the 12 party bags, there will be no toys left over.	1
7	17	Let's solve this step by step: 1. After 12 shots, Amelia's total score is: 12 × 4 = 48 points 2. After 13 shots, her new average is 5 points per shot. Let's call her score on the 13th shot 'x'. 3. So, the total score after 13 shots is: 48 + x 4. Now, we know that this total divided by 13 equals 5 (the new average). 5. We can write this as an equation: (48 + x) ÷ 13 = 5 6. Multiply both sides by 13: 48 + x = 5 × 13 = 65 7. Subtract 48 from both sides: x = 65 - 48 = 17 Therefore, Amelia must have scored 17 points on her 13th shot to raise her average to 5 points per shot.	1
8	45°	In a triangle, the sum of all angles is always 180°. Since angle A is a right angle, it measures 90°. The remaining angles, B and C, are equal in size. Let's call each of these angles x. We can write an equation: 90° + x + x = 180° Simplifying: 90° + 2x = 180° Subtracting 90° from both sides: 2x = 90° Dividing both sides by 2: x = 45° Therefore, angles B and C each measure 45°.	1
9	Monday	To determine the day of the week Amir is counting from, we need to count backwards 39 days from the day of his birthday party, which is on a Thursday. We know that a week has 7 days. If we divide 39 by 7, we get 5 with a remainder of 4 (39 ÷ 7 = 5 remainder 4). This means that 39 days is equal to 5 weeks and 4 days. If we count backwards 5 weeks from Thursday, we will still be on a Thursday. Now, we need to count backwards 4 more days from Thursday to get the day Amir is counting from. Counting backwards 4 days from Thursday: - 1 day before Thursday is Wednesday - 2 days before Thursday is Tuesday - 3 days before Thursday is Monday - 4 days before Thursday is Sunday Therefore, Amir is counting from Monday.	1

10	2.6 litres	Amir pours 200 ml of juice into each of 12 glasses.	1
		To find the total amount of juice poured, multiply 200 ml by 12:	
		200 ml × 12 = 2 400 ml	
		2 400 ml is equal to 2.4 litres.	
		The original bottle contained 5 litres of juice.	
		To find the amount of juice left, subtract the amount poured from the original amount:	
		5 litres - 2.4 litres = 2.6 litres	
		Therefore, there are 2.6 litres of orange juice left in the bottle.	