11+ Practice Test Answers

11+ Maths Test 38

Question	Answer	Explanation	Marks
1	$3(B - 150)$	Let's break down the problem step by step: 1. The total number of biscuits produced per day is B. 2. The number of chocolate biscuits produced is 150 less than the total number of biscuits. So, the number of chocolate biscuits is $B - 150$. 3. The number of ginger biscuits produced is 3 times the number of chocolate biscuits. Since the number of chocolate biscuits is $B - 150$, the number of ginger biscuits is $3(B - 150)$. Therefore, the correct expression representing the number of ginger biscuits produced by the bakery per day is $3(B - 150)$.	1
2	30°	To find the angle of each slice, we need to divide the total degrees in a circle by the number of slices. A full circle has 360°, and the extra-large pizza is cut into 12 equal slices. 360° ÷ 12 = 30° Therefore, each slice of the extra-large pizza has an angle of 30°.	1
3	16.25 cm	To find the average (mean) distance from the centre of the target, we need to add up all the distances and divide by the number of shots. The distances are: 12 cm, 15 cm, 18 cm, and 20 cm. 12 cm + 15 cm + 18 cm + 20 cm = 65 cm Amelia shot four arrows in total, so we divide the sum by 4: 65 cm ÷ 4 = 16.25 cm Therefore, the average distance from the centre of the target across Amelia's four shots is 16.25 cm.	1
4	4.6 kg	To find the total mass of the order, we need to calculate the mass of the cookies and the mass of the boxes separately, then add them together. Mass of cookies in one box: 12 cookies × 15 g per cookie = 180 g Mass of cookies in 20 boxes: 20 boxes × 180 g per box = 3,600 g = 3.6 kg Mass of 20 empty boxes: 20 boxes × 50 g per box = 1,000 g = 1 kg Total mass of the order: Mass of cookies + Mass of boxes = 3.6 kg + 1 kg = 4.6 kg Therefore, the total mass of the customer's order, including the boxes, is 4.6 kg.	1

5	26	To find the number of picture frames Olivia needs, we first need to calculate how many seashells can fit in one picture frame. Each picture frame has 4 rows, and each row can hold 6 seashells. So, the number of seashells in one picture frame is: 4 × 6 = 24 seashells. Now, we need to find out how many picture frames are needed to display all 624 seashells. To do this, we divide the total number of seashells by the number of seashells that can fit in one picture frame: 624 ÷ 24 = 26 Therefore, Olivia will need 26 picture frames to display all her seashells.	**1**
6	2.5	To find the average (mean) number of pizza slices eaten by each friend, we need to add up the total number of slices eaten and divide by the number of friends. Total slices eaten: 3 + 2 + 4 + 1 + 3 + 2 = 15 Number of friends: 6 Average slices eaten per friend: 15 ÷ 6 = 2.5 Therefore, the average number of pizza slices eaten by each friend is 2.5.	**1**
7	225	To find the total amount of chocolate chips needed, we need to multiply the number of grams required per cookie by the total number of cookies being made. Amount of chocolate chips per cookie: 12.5 grams Number of cookies: 18 12.5 × 18 = 225 To multiply decimals, we first multiply as if they were whole numbers: 125 × 18 = 2 250. Then, we count the total number of digits to the right of the decimal point in both factors (1 in 12.5 and 0 in 18, so 1 + 0 = 1) and place the decimal point in the product so that there are the same number of digits to the right of it (2 250 becomes 225.0). Therefore, the bakery needs a total of 225 grams of chocolate chips to make the batch of 18 cookies.	**1**
8	(7, 1)	To complete a parallelogram, the fourth point must form a pair of parallel sides with the existing points. Given the points (2, 1), (2, 6), and (7, 6), we can see that the sides formed by (2, 1) and (2, 6), and (2, 6) and (7, 6) are already parallel. To maintain the parallel sides, the fourth point must have the same x-coordinate as (7, 6) and the same y-coordinate as (2, 1). Therefore, the correct point to complete the parallelogram is (7, 1).	**1**
9	Square	A shape with four lines of symmetry is a square. An equilateral triangle has three lines of symmetry, a regular pentagon has five lines of symmetry, and a regular hexagon has six lines of symmetry. Therefore, the only shape among the given options that has exactly four lines of symmetry is a square.	**1**

10	28 m	To find the possible perimeter of the rectangular garden, we need to find the possible whole number dimensions that result in an area of 48 m^2. The factors of 48 are: 1, 2, 3, 4, 6, 8, 12, 16, 24, and 48. The possible whole number dimensions are: 1 m × 48 m 2 m × 24 m 3 m × 16 m 4 m × 12 m 6 m × 8 m To calculate the perimeter, we use the formula: P = 2(l + w), where l is the length and w is the width. For 1 m × 48 m: P = 2(1 + 48) = 2(49) = 98 m For 2 m × 24 m: P = 2(2 + 24) = 2(26) = 52 m For 3 m × 16 m: P = 2(3 + 16) = 2(19) = 38 m For 4 m × 12 m: P = 2(4 + 12) = 2(16) = 32 m For 6 m × 8 m: P = 2(6 + 8) = 2(14) = 28 m Among the given options, only 28 m is a possible perimeter for the rectangular garden with an area of 48 m^2.	1