11+ Practice Test Answers
11+ Maths Test 6

Question	Answer	Explanation	Marks
1	4:00 pm	To find the time when Amelia will have played 40 scales, we need to calculate the total time it takes her to play all the scales and add that to her start time. Each scale takes Amelia 45 seconds to play. For 40 scales, the total time would be: 45 seconds × 40 = 1 800 seconds To convert seconds to minutes, we divide by 60: 1 800 seconds ÷ 60 = 30 minutes So, it will take Amelia 30 minutes to play 40 scales. Amelia starts practising at 3:30 pm. To find the end time, we add 30 minutes to 3:30 pm: 3:30 pm + 30 minutes = 4:00 pm	1
2	Rectangle	The shape Amir is thinking of is a rectangle. A rectangle has two pairs of equal sides, with one pair longer than the other. The opposite sides are parallel to each other. Additionally, a rectangle has four right angles, which are equal to 90 degrees each. A square has all sides equal and four right angles, while a rhombus has all sides equal but not necessarily right angles. A parallelogram has two pairs of equal sides and opposite sides parallel, but its angles are not necessarily right angles. Therefore, the shape that fits all the given characteristics is a rectangle.	1
3	$S = P - (P ÷ 5)$	To reduce a price by 20%, we need to subtract 20% of the original price from the original price. To calculate 20% of the original price, we divide the original price by 5 (because 20% is equivalent to 1/5 or 0.2). So, if the original price is P, then 20% of P is $P ÷ 5$. Therefore, the sale price (S) is the original price (P) minus 20% of the original price ($P ÷ 5$). In other words, $S = P - (P ÷ 5)$.	1
4	6	To find out how many coaches Amelia needs to book, we need to divide the total number of students by the number of students each coach can hold. Total number of students: 144 Number of students per coach: 24 144 ÷ 24 = 6 Therefore, Amelia will need to book 6 coaches for the school trip to the zoo.	1

5	Rectangle	A regular hexagon has 6 sides and 6 lines of symmetry, a regular pentagon has 5 sides and 5 lines of symmetry, and a regular heptagon has 7 sides and 7 lines of symmetry. However, a rectangle is the only shape where the number of sides (4) differs from the number of lines of symmetry (2).	1
6	160 litres	To find the volume of a rectangular prism (like a fish tank), we use the formula: Volume = length × width × height Given: - Length = 80 cm - Width = 40 cm - Height = 50 cm Plugging in the values: Volume = 80 cm × 40 cm × 50 cm Volume = 160,000 cm³ Since 1 litre = 1,000 cm³, we divide the volume in cm³ by 1,000 to get the volume in litres: Volume in litres = 160,000 cm³ ÷ 1,000 Volume in litres = 160 litres Therefore, the volume of the fish tank is 160 litres.	1
7	65 cm	To convert millimetres (mm) to centimetres (cm), we need to divide the number of millimetres by 10. This is because there are 10 millimetres in 1 centimetre. 650 mm ÷ 10 = 65 cm Therefore, the length of the ribbon is 65 centimetres.	1
8	10:45 am	To find the departure time, we need to subtract the journey duration from the arrival time. The journey duration is 2 hours and 40 minutes, which can be written as 2:40. The arrival time is 1:25 pm. To subtract time, we first convert 1:25 pm to 24-hour format, which is 13:25. Now, we can perform the subtraction: 13:25 - 2:40 = 10:45 Converting 10:45 back to 12-hour format, we get 10:45 am. Therefore, Samantha's train departed from London at 10:45 am.	1

| 9 | 5.45 kg | To find the total weight of the fruit, we need to convert all the weights to the same unit and then add them together.

First, let's convert 1,750 grams of grapes to kilograms: 1,750 ÷ 1,000 = 1.75 kg

Now we have:

- 2.5 kg of apples

- 1.75 kg of grapes

- 1.2 kg of oranges

Adding these together: 2.5 + 1.75 + 1.2 = 5.45 kg

Therefore, the total weight of the fruit Tom has for the salad is 5.45 kg. | 1 |
| 10 | 15p + 0.75pb | To calculate the total cost, we need to consider two parts: the entry fee and the cost of the popcorn.

The entry fee is £15 per person, and there are p people in the group. So, the total entry fee is 15 × p = 15p pounds.

Each person buys b bags of popcorn, and each bag costs 75p (which is £0.75). The total cost of the popcorn is 0.75 × b × p = 0.75bp pounds, as there are p people each buying b bags.

To get the total cost, we add the entry fee and the popcorn cost: 15p + 0.75bp. | 1 |