11+ Practice Test Answers

11+ Maths Test 22

Question	Answer	Explanation	Marks
1	£48.50	To find the total cost of the balloons, we need to substitute the number of balloons Liam is buying (*b*) into the given expression: Total cost = 0.75*b* + 12.50 Liam is buying 48 balloons, so *b* = 48: Total cost = 0.75 × 48 + 12.50 Total cost = 36 + 12.50 Total cost = £48.50 Therefore, Liam will spend £48.50 in total on the balloons for his birthday party.	1
2	£8.00	To calculate the change James will receive, we first need to find the total cost of the pens. 8 pens at 25p each: 8 × £0.25 = £2.00 James paid with a £10 note, so to find the change, we subtract the total cost from the amount he paid: £10.00 - £2.00 = £8.00 Therefore, James will receive £8.00 in change.	1
3	east	Sarah starts facing north. She then does three 180° turns anticlockwise: - After the first 180° turn anticlockwise, she is facing south. - After the second 180° turn anticlockwise, she is facing north again. - After the third 180° turn anticlockwise, she is facing south once more. Finally, she does one 90° turn clockwise from facing south, which results in her facing east. Therefore, Sarah is now facing east.	1
4	5 hours and 25 minutes	To calculate the duration of the train journey, we need to find the difference between the departure and arrival times. The train departs at 18:45 and arrives the following day at 00:10. From 18:45 to 00:10, there are: 5 hours and 15 minutes from 18:45 to 00:00 (midnight) 10 minutes from 00:00 to 00:10 In total, that's 5 hours and 15 minutes + 10 minutes = 5 hours and 25 minutes. Therefore, the correct answer is 5 hours and 25 minutes.	1

5	£42.00	To calculate the mean, we need to add up all the values and then divide by the number of values. £45.20 + £38.75 + £41.60 + £43.90 + £40.55 = £210.00 There are 5 values in total, so we divide the sum by 5: £210.00 ÷ 5 = £42.00 Therefore, the mean amount Amir spends on petrol each time he fills up is £42.00.	1
6	30 kg	Let's think about the possible weights of the bag of flour: If the bag weighed 14 kg, each of the 6 containers would have 2 kg of flour (6 × 2 = 12), and there would be 2 kg left over. This works. If the bag weighed 20 kg, each container would have 3 kg of flour (6 × 3 = 18), and there would be 2 kg left over. This also works. If the bag weighed 26 kg, each container would have 4 kg of flour (6 × 4 = 24), and there would be 2 kg left over. This works too. However, if the bag weighed 30 kg, each container would have 5 kg of flour (6 × 5 = 30), and there would be no flour left over. This doesn't match the situation described. Therefore, 30 kg could not be the weight of the bag of flour.	1
7	42,245	To find the total number of books in the school library, we need to add the number of fiction books and non-fiction books together. Fiction books: 23,456 Non-fiction books: 18,789 23,456 + 18,789 = 42,245 Therefore, the total number of books in the school library is 42,245.	1
8	85°	In a triangle, the sum of all three angles is always 180°. We know that angle A is 40° and angle B is 55°. To find angle C, we can subtract the sum of angles A and B from 180°: Angle C = 180° - (40° + 55°) Angle C = 180° - 95° Angle C = 85° Therefore, the size of angle C is 85°.	1
9	50p	To find the cost of each cupcake, we first need to calculate the cost of one box of cupcakes. Since 8 boxes cost £24, we can divide £24 by 8 to get the cost of one box: £24 ÷ 8 = £3 per box Now that we know each box costs £3 and contains 6 cupcakes, we can divide £3 by 6 to find the cost of each individual cupcake: £3 ÷ 6 = 50p per cupcake Therefore, each cupcake costs 50p.	1

10	88°	In a quadrilateral, the sum of all four angles is always 360°. Since one angle is acute, it must be less than 90°. Let's assume the smallest possible acute angle, which is 1°. The obtuse angle must be greater than 90° but less than 180°. Let's assume the largest possible obtuse angle, which is 179°. Now, we can calculate the sum of the remaining two angles: 360° - (1° + 179°) = 360° - 180° = 180° The question asks for the smallest possible sum of the remaining two angles, so we need to distribute the 180° between the two angles in a way that minimises their sum. The smallest possible sum is achieved when one angle is as small as possible (1°) and the other angle takes the remaining value: 180° - 1° = 179° Therefore, the smallest possible sum of the remaining two angles is: 1° + 87° = 88°	1