

11+ Practice Test Answers

11+ Maths Test 17

Question	Answer	Explanation	Marks
1	£7.25	<p>The bakery charges a base price of £5 for a cake, and an additional £0.75 for each extra ingredient added.</p> <p>Sarah's cake has three extra ingredients: strawberries, chocolate chips, and whipped cream.</p> <p>To calculate the total cost:</p> <p>Base price: £5</p> <p>Extra ingredients: $3 \times £0.75 = £2.25$</p> <p>Total cost: $£5 + £2.25 = £7.25$</p> <p>Therefore, the total cost of Sarah's cake will be £7.25.</p>	1
2	22	<p>To calculate the mean height of the plants, we need to add up all the heights and divide by the number of plants.</p> <p>The heights of the plants are: 24 cm, 19 cm, 21 cm, 26 cm, and 20 cm.</p> <p>Step 1: Add up all the heights: $24 + 19 + 21 + 26 + 20 = 110$ cm</p> <p>Step 2: Count the number of plants: There are 5 plants in total.</p> <p>Step 3: Divide the total height by the number of plants: $110 \div 5 = 22$ cm</p> <p>Therefore, the mean height of the plants in Sarah's garden is 22 cm.</p>	1
3	91	<p>To find the total number of minutes Amelia spent practising piano, we need to add the time she spent in each practice session.</p> <p>In the first three sessions, Amelia practised for 18 minutes, 24 minutes and 27 minutes.</p> <p>$18 + 24 + 27 = 69$ minutes</p> <p>In the fourth session, she practised for 5 minutes less than the third session. The third session was 27 minutes, so the fourth session would be:</p> <p>$27 - 5 = 22$ minutes</p> <p>Now, we can add the time from all four sessions:</p> <p>$69 + 22 = 91$ minutes</p> <p>Therefore, the total number of minutes Amelia spent practising piano is 91 minutes.</p>	1

4	11.3 cm	<p>To find the length of the diagonal of a square, we can use the Pythagorean theorem.</p> <p>The Pythagorean theorem states that in a right-angled triangle, the square of the length of the hypotenuse (the diagonal in this case) is equal to the sum of the squares of the other two sides.</p> <p>In a square, all sides are equal. Let's call the length of each side 'a'.</p> <p>So, $a = 8$ cm</p> <p>Now, let's apply the Pythagorean theorem:</p> $\text{diagonal}^2 = a^2 + a^2$ $\text{diagonal}^2 = 8^2 + 8^2$ $\text{diagonal}^2 = 64 + 64$ $\text{diagonal}^2 = 128$ <p>Taking the square root of both sides:</p> $\text{diagonal} = \sqrt{128}$ $\text{diagonal} \approx 11.3 \text{ cm}$ <p>Therefore, the length of the diagonal of the square is approximately 11.3 cm.</p>	1
5	6 hours	<p>Amelia swims for 18 minutes each day.</p> <p>Over 20 days, the total number of minutes she spends swimming is:</p> $18 \text{ minutes} \times 20 = 360 \text{ minutes}$ <p>To convert minutes to hours, we divide by 60 (as there are 60 minutes in an hour):</p> $360 \text{ minutes} \div 60 = 6 \text{ hours}$ <p>Therefore, over the course of 20 days, Amelia will spend 6 hours swimming.</p>	1
6	21	<p>To find the number of minibuses needed, we need to divide the total number of children by the number of children each minibus can carry.</p> <p>Total number of children: 252 Number of children per minibus: 12</p> $252 \div 12 = 21$ <p>Therefore, 21 minibuses will be needed to transport all 252 children on the school trip.</p>	1
7	£13,883.75	<p>To calculate the total amount raised after deducting the venue hire cost:</p> <p>Step 1: Add the amount raised last year to the additional amount raised this year:</p> $£12,345 + £2,789.50 = £15,134.50$ <p>Step 2: Subtract the venue hire cost from the total amount raised:</p> $£15,134.50 - £1,250.75 = £13,883.75$ <p>Therefore, the charity raised a total of £13,883.75 after deducting the venue hire cost.</p>	1

8	6 hours	<p>Samantha practises her violin for 18 minutes each day.</p> <p>Over 20 days, the total number of minutes she spends practising is:</p> $18 \text{ minutes} \times 20 = 360 \text{ minutes}$ <p>To convert minutes to hours, we divide by 60 (as there are 60 minutes in an hour):</p> $360 \text{ minutes} \div 60 = 6 \text{ hours}$ <p>Therefore, Samantha spends 6 hours practising her violin over the course of 20 days.</p>	1
9	£9.50	<p>To calculate the cost of Sarah's taxi ride, we need to substitute the distance travelled (d) with 5 miles in the given formula:</p> $\text{Cost} = \text{£}3.50 + \text{£}1.20 \times 5$ <p>First, we multiply £1.20 by 5:</p> $\text{£}1.20 \times 5 = \text{£}6.00$ <p>Then, we add the result to the base fare of £3.50:</p> $\text{£}3.50 + \text{£}6.00 = \text{£}9.50$ <p>Therefore, Sarah will have to pay £9.50 for her 5-mile taxi ride in London.</p>	1
10	80	<p>To find the number of jugs needed to fill the fish tank, we first need to calculate the volume of the tank.</p> <p>Volume of a cuboid = length \times width \times height</p> $\text{Volume of the fish tank} = 80 \text{ cm} \times 40 \text{ cm} \times 50 \text{ cm} = 160,000 \text{ cm}^3$ $1 \text{ litre} = 1,000 \text{ cm}^3$ <p>So, the volume of the fish tank is $160,000 \div 1,000 = 160$ litres</p> <p>Each jug can hold 2 litres of water.</p> <p>To find the number of jugs needed, we divide the volume of the tank by the volume of each jug:</p> $160 \text{ litres} \div 2 \text{ litres per jug} = 80 \text{ jugs}$ <p>Therefore, Sarah will need 80 jugs of water to completely fill the fish tank.</p>	1