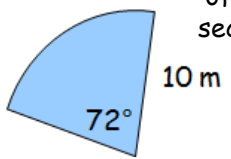

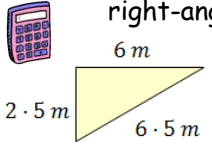


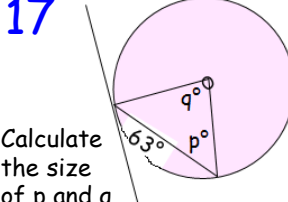
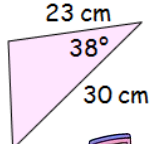


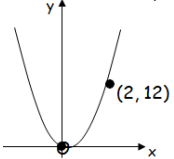
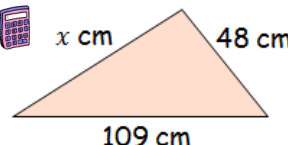
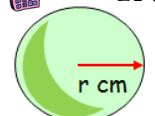




<p>1 Solve the following equation...</p> $\frac{x}{4} + \frac{x}{2} = 9$	<p>2 Calculate the area of this sector...</p> 	<p>3 Find the equation of the line passing through (1, -2) and (2, 4).</p>	<p>4 Simplify...</p> $\sqrt{18} + \sqrt{2} - \sqrt{8}$	<p>5 A box of cereal is on special offer and contains 600 grams. This is 20% more than the standard box. How many grams does the standard box contain?</p> 	<p>6 Determine whether this triangle is right-angled...</p> 
<p>7 Write the following in it's simplest index form...</p> $\frac{4x^2 \times 6x^8}{3x^5}$	<p>8 A function is defined as</p> $f(x) = x^2 + 9x$ <p>Find $f(-2)$.</p>	<p>9 Multiply out the following brackets and simplify...</p> $(2x - 7)(x^2 + 4x - 5)$	<p>10 Calculate the standard deviation for the following data set...</p>  <p>72, 74, 75, 79</p>	<p>11 Solve the following system of equations...</p> $\begin{aligned} 3x + 2y &= 14 \\ 5x - 3y &= 17 \end{aligned}$	<p>12 Factorise...</p> $3c^2 + 2c - 5$
<p>13 Calculate...</p> $3\frac{1}{3} \div 1\frac{4}{5}$	<p>14 Change the subject of the formula to r...</p> $e = 9r^2 + 1$	<p>15 Calculate the missing volume...</p>  <p>Volume = 80 mm³ Volume = ?</p>	<p>16 Write the following in the form...</p> $y = (x + a)^2 + b$ $y = x^2 + 4x - 2$	<p>17</p>  <p>Calculate the size of p and q...</p>	<p>18 Add the following fractions...</p> $\frac{5}{(x+3)} + \frac{3}{(x+7)}$
<p>19 Express the following with a rational denominator and simplify if required...</p> $\frac{8}{\sqrt{6}}$	<p>20</p>  <p>Calculate the area of the triangle...</p> 	<p>21 How much money will there be in a bank account when £6000 is invested for 3 years at 4.7% per annum?</p> 	<p>22 The diagram shows the parabola with equation;</p> $y = kx^2$  <p>What is the value of k?</p>	<p>23 Evaluate...</p> $81\frac{3}{4}$	<p>24 Determine the gradient and the y-intercept of the following equation...</p> $5x + 3y = 9$
<p>25 Calculate the semi-interquartile range for the following data set...</p> <p>8, 14, 12, 7, 16, 15</p>	<p>26 Calculate the length of the missing side...</p> 	<p>27 Express this fraction in it's simplest form...</p> $\frac{x^2 - 36}{x^2 + 3x - 18}$	<p>28 The volume of this sphere is 2143.57 cm³.</p>  <p>Calculate it's radius...</p>	<p>29 Vector $\mathbf{a} = \begin{pmatrix} 2 \\ 0 \\ 5 \end{pmatrix}$ and vector $\mathbf{b} = \begin{pmatrix} 7 \\ -4 \\ 1 \end{pmatrix}$.</p> <p>Calculate $\mathbf{a} + \mathbf{b}$.</p>	<p>30 Solve the equation</p> $7 \sin x^\circ - 1 = 3$ <p>for $0 \leq x \leq 360$.</p>