













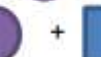




|  | National Curriculum Statement                  | All students  |  |  |
|--|--|---|--|--|
|  |  | Fluency   | Reasoning  | Problem Solving  |
|  | Express missing number problems algebraically. | <ul style="list-style-type: none"> <li>Which of the following algebraic statements correctly describes the following problem?<br/><i>"Four times a number and add 5 to get the answer 17"</i></li> </ul> <div> <div><math>4n + 5 = 17</math></div> <div><math>5n + 4 = 17</math></div> <div><math>n^4 + 5 = 17</math></div> <div><math>4(n + 5) = 17</math></div> </div> <ul style="list-style-type: none"> <li>An electrician charges £15 for every job that he attends and then £8 an hour for every hour he works.<br/>Tick the formula that could be used to calculate how much the electrician would charge for a job. <math>h</math> stands for hours:<br/><div> <div><math>9h - 16</math></div> <div><math>16h + 9</math></div> <div><math>9h + 16</math></div> </div> </li> <li>A plumber charges £9 an hour. She is currently offering a £5 discount for all jobs. Write a formula to calculate how much money she should charge her customers.</li> </ul> | <ul style="list-style-type: none"> <li>A taxi driver charges £3 at the start of each journey. For every mile covered another 25p is added to the fare.</li> </ul>  <p>The driver writes the following formula.<br/>Cost of journey = <math>3 + \text{number of miles} \times 25</math></p> <p>Is the formula correct? Prove it.</p> <ul style="list-style-type: none"> <li>James and Kelsey are using the following formula to work out what they should charge for three hours work.<br/>Cost in pounds = <math>40 + 20 \times \text{number of hours}</math><br/>James writes down £180<br/>Kelsey writes down £100<br/>Who do you agree with? Why?</li> </ul> | <ul style="list-style-type: none"> <li>Find the value of the circle in each of the following problems. It is worth a different value in each question.</li> </ul> <div> <div> = 5</div> <div> = 8</div> </div> <div> <div> +  +  +  = 27</div> <div> +  +  +  = 30</div> <div> +  +  +  +  = 33</div> </div> <p>Can you write each of the number sentences above algebraically?</p> <ul style="list-style-type: none"> <li>Kyra has 92p. She buys yoyos (<math>y</math>) costing 11p and lollies (<math>l</math>) cost 4p.<br/>Can you write a formula to solve her problem?<br/>Can you find more than one set of numbers to solve her problem?</li> </ul>  |