| | **National Curriculum Statement** | **All students** | | |
|---|---|---|---|---|
| | | **Fluency** | **Reasoning** | **Problem Solving** |
| **Algebra** | Express missing number problems algebraically. | • Which of the following algebraic statements correctly describes the following problem?<br><br>*"Four times a number and add 5 to get the answer 17"*<br><br>$4n + 5 = 17$  $5n + 4 = 17$<br>$n^4 + 5 = 17$  $4(n + 5) = 17$<br><br>• 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. h stands for hours:<br><br>$9h - 16$  $16h + 9$<br>$9h + 16$<br><br>• 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. | • A taxi driver charges £3 at the start of each journey. For every mile covered another 25p is added to the fare.<br><br><br><br>The driver writes the following formula.<br><br>Cost of journey = 3 + number of miles x 25<br><br>Is the formula correct? Prove it.<br><br>• James and Kelsey are using the following formula to work out what they should charge for three hours work.<br><br>Cost in pounds = 40 + 20 x number of hours:<br><br>James writes down £180<br>Kelsey writes down £100<br><br>Who do you agree with? Why? | • Find the value of the circle in each of the following problems. It is worth a different value in each question.<br><br><br><br>Can you write each of the number sentences above algebraically?<br><br>• Kyra has 92p. She buys yoyos (y) costing 11p and lollies (l) 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?<br><br> |