

One point questions	Two point questions	Three point questions	Five point questions
<p>1. $3 \times \square = 27$</p> <p>2. $4 \times \square = 24$</p> <p>3. $\square \times 4 = 32$</p> <p>4. $\square \times 8 = 48$</p> <p>5. $\square \div 2 = 9$</p> <p>6. $28 \div \square = 7$</p> <p>7. $3 \times \square + 4 = 19$</p> <p>8. $4 \times \square - 7 = 13$</p>	<p>e.g.</p> $\begin{array}{r} 3x + 2 = 17 \\ -2 \\ \hline 3x = 15 \\ \div 3 \\ \hline \underline{x = 5} \end{array}$ <p>1. $3x + 5 = 11$</p> <p>2. $2x + 7 = 13$</p> <p>3. $4x - 1 = 11$</p> <p>4. $5x - 3 = 17$</p> <p>5. $4x + 3 = 5$</p> <p>6. $2x + 7 = 5$</p>	<p>e.g.</p> $\begin{array}{r} 2(3x + 5) = 22 \\ -10 \\ \hline 6x + 10 = 22 \\ -10 \\ \hline 6x = 12 \\ \div 6 \\ \hline \underline{x = 2} \end{array}$ <p>1. $3(2x - 5) = 9$</p> <p>2. $5(2x + 4) = 40$</p> <p>3. $6(3x - 2) = 24$</p> <p>4. $3(4x - 7) = 15$</p>	<p>e.g.</p> $\begin{array}{r} 5x + 2 = 3x + 10 \\ -3x \\ \hline 2x + 2 = 10 \\ -2 \\ \hline 2x = 8 \\ \div 2 \\ \hline \underline{x = 4} \end{array}$ <p>1. $5x + 2 = 3x + 6$</p> <p>2. $4x + 7 = 2x + 11$</p> <p>3. $9x - 1 = 4x + 14$</p>

Teacher notes:

This can be used to test, and develop further, students understanding of equations. It can be particularly effective when used under timed conditions where students have to score as many points as possible, choosing the questions they want to attempt.

Answers:**One-point questions [8]**

(1) 9 (2) 6 (3) 8 (4) 6 (5) 18 (6) 4 (7) 5 (8) 5

Two-point questions [12]

(1) $x = 2$ (2) $x = 3$ (3) $x = 3$ (4) $x = 4$ (5) $x = \frac{1}{2}$ (6) $x = -1$

Three-point questions [12]

(1) $x = 4$ (2) $x = 2$ (3) $x = 2$ (4) $x = 3$

Five-point questions [15]

(1) $x = 2$ (2) $x = 2$ (3) $x = 3$

Total points = 47

Additional guidance:**Two-point questions - assign 1 mark for intermediate working**

(1) $3x = 6$ (2) $2x = 6$ (3) $4x = 12$ (4) $5x = 20$ (5) $4x = 2$ (6) $2x = -2$

Three-point questions - assign 1 mark for each line of intermediate working

(1) $6x - 15 = 9$; $6x = 24$ (2) $10x + 20 = 40$; $10x = 20$
(3) $18x - 12 = 24$; $18x = 36$ (4) $12x - 21 = 15$; $12x = 36$

Five-point questions - assign 1 mark for each line of intermediate working

(1) $2x + 2 = 6$; $2x = 4$ (2) $2x + 7 = 11$; $2x = 4$ (3) $5x - 1 = 14$; $5x = 15$