

# Algebra lesson 1: Quiz

## Pre-requisite knowledge:

$$\textcircled{1} \quad 15 + 7 = 22$$

$$\textcircled{6} \quad -1 + -1 = -2$$

$$\textcircled{2} \quad 18 - 9 = 9$$

$$\textcircled{7} \quad -1 - -1 = 0$$

$$\textcircled{3} \quad 5 \times 8 = 40$$

$$\textcircled{8} \quad -1 \times -1 = 1$$

$$\textcircled{4} \quad 12 \div 3 = 4$$

$$\textcircled{9} \quad -1 \div -1 = 1$$

$$\textcircled{5} \quad \frac{1}{2} + \frac{3}{5} = \frac{5}{10} + \frac{6}{10} \\ = \frac{11}{10}$$

$$\textcircled{10} \quad 5 + -10 = -5$$

## Order of operations

$$\textcircled{1} \quad 9 + 7 - 5 = 16 - 5 = 11 \quad \textcircled{9} \quad (4 - 5) \times -1 = -1 \times -1 = 1$$

$$\textcircled{2} \quad 9 + 7 \times 5 = 9 + 35 = 44 \quad \textcircled{10} \quad 4 - 5 \times -1 = 4 + 5 = 9$$

$$\textcircled{3} \quad (9 + 7) \times 5 = 16 \times 5 = 80 \quad \textcircled{11} \quad -4 - -5 + 2 \times -3 = -4 + 5 + -6 = -5$$

$$\textcircled{4} \quad 9 + 7^2 \times 2 = 9 + 49 \times 2 \\ = 9 + 98 = 107 \quad \textcircled{12} \quad (3 + 2)^2 - 3 = \\ = (5)^2 - 3 = 25 - 3 \\ = 22$$

$$\textcircled{5} \quad 8 \div 2 + 2 = 4 + 2 = 6$$

$$\textcircled{6} \quad 8 \div (2 + 2) = 8 \div 4 = 2$$

$$\textcircled{7} \quad (8 - 2 \times 3 + 4) \div 3 = (8 - 6 + 4) \div 3 = 6 \div 3 = 2$$

$$\textcircled{8} \quad 10 + \cancel{8 \div 2} + \cancel{3 \times 2} \div 3 = 10 + 4 + 6 \div 3 \\ = 10 + 4 + 2 \\ = 16$$

Find the value of  $x$  by guess & check

①  $x + 5 = 12$       $x = ?$       $x = 7$

②  $x \times 7 = 35$       $x = 5$

③  $30 - x = 15$       $x = 15$

④  $40 + x = 45$       $x = 5$

⑤  $18 \div x = 6$       $x = 3$

⑥  $\frac{27}{x} = 9$       $x = 3$

Re-write the following equations to make the circled term the subject.

Example ①  $5 + \textcircled{7} = 12$

Answer:  $7 = 12 - 5$

Example ②  $\textcircled{8} \times 4 = 32$

Answer:  $8 = 32 \div 4$

①  $\textcircled{20} - 5 = 15$       $20 = 15 + 5$

②  $7 - \textcircled{13} = -6$       $-13 = -6 - 7$

③  $100 \div \textcircled{2} = 50$       $2 = \frac{100}{50}$

④  $\textcircled{9} \times 8 = 72$       $9 = 72 \div 8$