

USING SYMBOLS AND EXPRESSIONS TO THINK MATHEMATICALLY— SET 6

A Can use formal operations to solve equations involving real numbers by operating equally on both sides.

Students may solve these equations slightly differently or in a more simplified way skipping some steps below.

<p>Example 1</p> $6x + 4 = 28$ $6x = 28 - 4$ $6x = 24$ $x = 24 \div 6$ $x = 4$	<p>Example 2</p> $\frac{3}{5}j = 18$ $3 \div 5 \times j = 18$ $3j = 18 \times 5$ $3j = 90$ $j = 90 \div 3$ $j = 30$	<p>Example 3</p> $\frac{n+2}{4} = 7$ $(n+2) \div 4 = 7$ $n+2 = 7 \times 4$ $n+2 = 28$ $n = 28 - 2$ $n = 26$
<p>Example 4</p> $2x - 7 = 11$ $2x = 11 + 7$ $2x = 18$ $x = 18 \div 2$ $x = 9$	<p>Example 5</p> $\frac{n+12}{7} = 6$ $(n+12) \div 7 = 6$ $n+12 = 6 \times 7$ $n+12 = 42$ $n = 42 - 12$ $n = 30$	<p>Example 6</p> $\frac{z}{120} = \frac{3}{100}$ $z \times 100 = 120 \times 3$ $z = \frac{120 \times 3}{100}$ $z = \frac{360}{100}$ $z = 3.6$

B Can write equity statements of problem situations involving four or more terms or factors, including one unknown.

Hana made bracelets to give to her friends. She gave 3 bracelets to each of her friends, after handing them out she had 7 left over, she made 22 bracelets altogether. How many friends did she give them too?

$$(3 \text{ bracelets} \times ? \text{ friends}) + 7 \text{ bracelets} = 22 \text{ bracelets}$$

$$3x + 7 = 22$$

Year 8 is made up of 3 classes, each with the same number students. There are 42 girls and 27 students in each class. How many boys are there?

$$(? \text{ boys} + 42 \text{ girls}) \div 3 \text{ classes} = 27 \text{ students in each class}$$

$$\frac{b + 42}{3} = 27$$