

Varied Fluency

Step 7: One-Step Equations

National Curriculum Objectives:

Mathematics Year 6: (6A1) [Express missing number problems algebraically](#)

Differentiation:

Developing Questions to support forming and solving one-step equations. Using all four operations and whole numbers.

Expected Questions to support forming and solving one-step equations. Using all four operations, whole numbers, with some decimals and fractions.

Greater Depth Questions to support forming and solving one step equations. Using all four operations, whole numbers, fractions, decimal and negative numbers.

More [Year 6 Algebra](#) resources.

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One-Step Equations

1a. Circle the equation that is the odd one out.

$$2b = 20$$

$$25 - 15 = b$$

$$11a = 33$$



VF

One-Step Equations

1b. Circle the equation that is the odd one out.

$$a - 6 = 6$$

$$200 \div a = 40$$

$$2 + a = 8$$



VF

2a. Which representation matches the expression $n + 1$?



VF

2b. Which representation matches the expression $c + c$?



VF

3a. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$2a = 10 \quad \square \quad b + 9 = 11 \quad \square \quad 2b - c = 19$$



VF

3b. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$a \times a = 36 \quad \square \quad b - 10 = 9 \quad \square \quad 4 \times c = 16$$



VF

4a. What numbers would balance the equations below?

A. $p + 1 = 30$

B. $d - 4 = 14$

C. $a \div 6 = 3$



VF

4b. What numbers would balance the equations below?

A. $b - 11 = 0$

B. $c + c + c = 12$

C. $200 \div 5 = a$



VF

One-Step Equations

One-Step Equations

5a. Circle the equation that is the odd one out.

$$5a = 1$$

$$20 \div 100 = a$$

$$12a = 3.6$$



VF

5b. Circle the equation that is the odd one out.

$$b + 3 = 25$$

$$11^2 = b$$

$$123 - b = 2$$



VF

6a. Which representation matches the expression $2 + c$?



VF

6b. Which representation matches the expression $n + 4$?



VF

7a. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$6a = 30 \quad \square \quad b - 4 = 10 \quad \square \quad 3 + c = 17$$



VF

7b. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$5b = 7.5 \quad \square \quad c - 5 = 9 \quad \square \quad 4 + d = 16$$



VF

8a. What numbers would balance the equations below?

A. $5c = 37 \frac{1}{2}$

B. $42 - a = 24.5$

C. $9b = 36$



VF

8b. What numbers would balance the equations below?

A. $7m = 56$

B. $3n = 121 \frac{1}{2}$

C. $6 + d = 28.5$



VF

One-Step Equations

One-Step Equations

9a. Circle the equation that is the odd one out.

$$a^2 = 30\frac{1}{4}$$

$$25.5 \div 10 = a$$

$$12a = 30.6$$



VF



9b. Circle the equation that is the odd one out.

$$y \times 0.5 = 27\frac{1}{2}$$

$$-45 + 100 = y$$

$$25y = 137.5$$

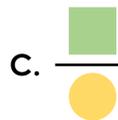
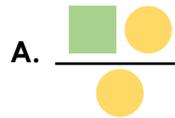
VF

10a. Which representation matches the expression $2m + 0.5$?



VF

10b. Which representation matches the expression $n \div 1$?



VF

11a. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$c^2 = 169 \quad \square \quad d - 0.5 = 2 \quad \square \quad e - 10 = -7.5$$



VF

11b. Compare the value of the letters in each equation using $<$, $>$ or $=$.

$$d \times 8 = 72 \quad \square \quad -5 + e = 2 \quad \square \quad f \div 2 = 3.5$$



VF

12a. What numbers would balance the equations below?

A. $c \div 8 = 6.5$

B. $b = 81 \div b$

C. $7n = 1.4$



VF

12b. What numbers would balance the equations below?

A. $4n = 23$

B. $r - 1.5 = -1$

C. $c = 49 \div c$



VF

Varied Fluency One-Step Equations

Developing

1a. $11a = 33$

2a. **A**

3a. $>, <$

4a. $p = 29; d = 18; a = 18$

Expected

5a. $12a = 3.6$

6a. **B**

7a. $<, =$

8a. $c = 7.5; a = 17.5; b = 4$

Greater Depth

9a. $a^2 = 30\frac{1}{4}$

10a. **C**

11a. $>, =$

12a. $c = 52; b = 9; n = 0.2$

Varied Fluency One-Step Equations

Developing

1b. $200 \div a = 40$

2b. **C**

3b. $<, >$

4b. $b = 11; c = 4; a = 40$

Expected

5b. $b + 3 = 25$

6b. **A**

7b. $<, >$

8b. $m = 8; n = 40.5; d = 22.5$

Greater Depth

9b. $25y = 137.5$

10b. **C**

11b. $>, =$

12b. $n = 5.75; r = 0.5; c = 7$