

Unit 2

Chapter 2

Algebra I Part I

Equations Day 1

7 February 2011

1st 5

SIMPLIFY.

- $-2(2x-4) - 3(-2x+1)$
 $-4x + 8 + 6x - 3 = 2x + 5$
- $\sqrt{175}$
 $5\sqrt{7}$
 $15 \cdot 25$
 $15 \cdot 5 \cdot 7$
- $5\sqrt{3} - 2\sqrt{2} - 8\sqrt{3} = -3\sqrt{3} - 2\sqrt{2}$

Equations Day 1

Solving One-Step Equations

- Addition Property of Equality
 - For every real number a, b, and c, if $a = b$, then
 - $8 = 5 + 3$, so $8 + 4 = 5 + 3 + 4$
- Subtraction Property of Equality
 - For every real number a, b, and c, if $a = b$, then a
 - $8 = 5 + 3$, so $8 - 2 = 5 + 3 - 2$

Equations Day 1

Solving One-Step Equations

- Solve $x - 3 = -8$
 $\frac{+3}{+3} \quad \frac{+3}{+3}$
 $x + 0 = -5$
 $x = -5$
- Solve $m - 10 = 2$
 $\frac{+10}{+10} \quad \frac{+10}{+10}$
 $m + 0 = 12$
 $m = 12$

Equations Day 1

Solving One-Step Equations

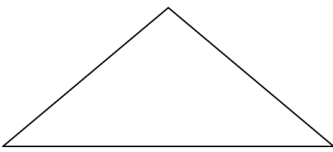
- Solve $y - 7.6 = 4$
 $\frac{+7.6}{+7.6} \quad \frac{+7.6}{+7.6}$
 $y + 0 = 11.6$
 $y = 11.6$
- Solve $x + 10 = 14$
 $\frac{-10}{-10} \quad \frac{-10}{-10}$
 $x + 0 = 4$
 $x = 4$
- Solve $-9 = b - 5$
 $\frac{+5}{+5} \quad \frac{+5}{+5}$
 $-4 = b$
 $b = -4$

Equations Day 1

Solving One-Step Equations

- The triangle below is isosceles with sides AB and BC being congruent. Side AB = 15 and side BC = $a + 4.2$. Find the value of a.

$AB = BC$
 $15 = a + 4.2$
 $\frac{-4.2}{-4.2} \quad \frac{-4.2}{-4.2}$
 $10.8 = a$



Equations Day 1

Solving One-Step Equations

- A mother holds her baby and steps on a scale. She and the baby weigh 147 pounds. Alone, the mother weighs 129 pounds. How much does the baby weigh?

$$\begin{aligned} \text{mom} + \text{baby} &= 147 \\ 129 + b &= 147 \\ \underline{-129} \quad \underline{-129} & \\ b &= 18 \text{ lbs} \end{aligned}$$

Equations Day 1

Solving One-Step Equations

- Brennan withdrew \$25 from his bank account at an ATM. The transaction slip said the remaining balance was now \$243.19. Write and solve an equation to find Brennan's previous balance.

$$\begin{aligned} x - 25 &= 243.19 \\ \underline{+25} \quad \underline{+25} & \\ x &= 268.19 \end{aligned}$$

Equations Day 1

Solving One-Step Equations

- Multiplication Property of Equality
 - For every real number a, b, and c, if $a = b$, then
- $\frac{6}{2} = 3$, so $\frac{6}{2} \times 2 = 3 \times 2$
- Division property of Equality
 - For every real number a, b, and c, with $c \neq 0$, if $a = b$, then
- $3 + 1 = 4$, so $\frac{3 + 1}{2} = \frac{4}{2}$

Equations Day 1

Solving One-Step Equations

- Solve $-\frac{r}{4} = -10.4$

$$-4 \cdot -\frac{r}{4} = \frac{4}{4}r = 1r$$

$$-4 \cdot -\frac{r}{4} = -10.4 \cdot -4$$

$$1r = 41.6$$

$$r = 41.6$$
- Solve $\frac{x}{-3} = 18$

$$-3 \cdot \frac{x}{-3} = 18 \cdot -3$$

$$1x = -54$$

$$x = -54$$

Equations Day 1

4c means 4 times c

Solving One-Step Equations

- Solve $\frac{4c}{4} = -96$

$$1c = -24$$

$$c = -24$$
- Solve $20 = -2x$

$$\frac{20}{-2} = \frac{-2x}{-2}$$

$$-10 = 1x$$

$$x = -10$$
- Solve $-\frac{8}{5} = 5y$

$$\frac{-\frac{8}{5}}{5} = \frac{5y}{5}$$

$$y = -\frac{8}{25} = -\frac{1}{3\frac{1}{5}}$$

Equations Day 1

PW 16

- Workbook pg. 20 # 1 - 50 Odd

Equations Day 1