Algebra 1

Our Goal: To review solving equations using several transformations

Warm Up: You will need your homework, notebook, and computer
Everything else, bags etc. on the shelves, thank you

Today's Homework

1.2 Exercises, p.16-18: 6-54 (multiples of 3)

Previous Homework

1.1 Exercises, p.8-10: 6-57 (multiples of 3)

$22 \times 21 \times 20 \times \cdots 3 \times 2 \cdot 1$

$22 \cdot 21 \cdots\cdots 1$

$22!$

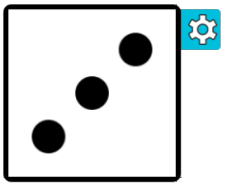
To gamble in NJ you need to be how old?

Simplify the expression.

1. $(2x^2 - 6x) - (-2x^2 + 3x)$

2. $(5a^2 - a) - (2a^2 - 5a)$

$4a+3a^2$



3. $(4y^2 + y) - (6y^2 - 5y)$

4. $(-2d^2 - d) - (5d^2 - 5d)$

5. $(2h^2 + 5z) + (2h^2 + 9z)$

$4h^2+14z$

6. $(2y^2 + 9xy) + (3y^2 - 2xy)$

Determine whether the given number is a solution to the equation.

1. $6x + 1 = 7x - 1;\ x = 2$

2. $5 - 4x = 2x^2 + x;\ x = 3$

3. $2y - \frac{2}{3} = 2; y = \frac{4}{3}$

4. $\frac{4u}{3} = -8; u = -6$

Core Concept

Solving Multi-Step Equations

To solve a multi-step equation, simplify each side of the equation, if necessary. Then use inverse operations to isolate the variable.

Solve $2.5x - 13 = 2$. Check your solution.

Solve $-12 = 9x - 6x + 15$. Check your solution.

Solve the equation. Check your solution.

1. $-2n + 3 = 9$ **2.** $-21 = \frac{1}{2}c - 11$ **3.** $-2x - 10x + 12 = 18$

Solve $2(1 - x) + 3 = -8$. Check your solution.

Solve the equation. Check your solution.

4. $3(x + 1) + 6 = -9$

$x = -6$

5. $15 = 5 + 4(2d - 3)$

$d = \frac{22}{8} = \frac{11}{4}$

6. $13 = -2(y - 4) + 3y$

$y = 5$

7. $2x(5 - 3) - 3x = 5$

$x = 5$

8. $-4(2m + 5) - 3m = 35$

$m = -5$

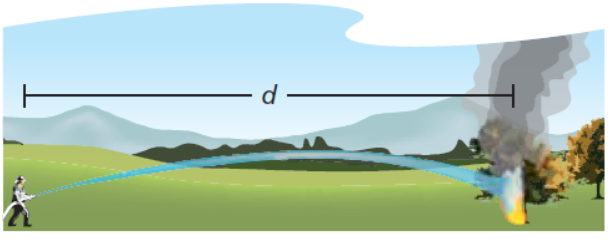
9. $5(3 - x) + 2(3 - x) = 14$

$x = 11$

Use the table to find the number of miles x you need to bike on Friday so that the mean number of miles biked per day is 5.

Day	Miles
Monday	3.5
Tuesday	5.5
Wednesday	0
Thursday	5
Friday	x

10. The formula $d = \frac{1}{2}n + 26$ relates the nozzle pressure n (in pounds per square inch) of a fire hose and the maximum horizontal distance the water reaches d (in feet). How much pressure is needed to reach a fire 50 feet away?



Your school's drama club charges $4 per person for admission to a play. The club borrowed $400 to pay for costumes and props. After paying back the loan, the club has a profit of $100. How many people attended the play?

$$\text{Profit} = \text{Revenue} - \text{Cost}$$

$$100 = 4p - 400$$

$$500 = 4p$$

$$\frac{500}{4} = p$$

$$p = 125$$

$\therefore$

11. You have 96 feet of fencing to enclose a rectangular pen for your dog. To provide sufficient running space for your dog to exercise, the pen should be three times as long as it is wide. Find the dimensions of the pen.

Exit Ticket: Solve $8x + 9 - 4x = 25$. Check your solution.