Name_____

Write your questions here!

Inverse Operations:

Operation	Inverse Operation
Addition +	Subtraction -
Subtraction -	Addition +
Multiplication *	Division ÷
Division ÷	Multiplication *

To solve equations with multiple steps, we combine like terms, use reciprocals, apply the distributive property and use inverse operations.

Always try to simplify before solving, if possible!

Examples:

Combine like-terms, first, if possible!

Solve the following equation by combining like terms first:

Solve the following equations by using the distributive property:

Solve the following equations by using a reciprocal:

There are several ways to solve this equation. You decide for yourself the best method:

Now, summarize your notes here!

Practice 3.3

Solve each equation.

1) $-3 + 2x + 2x = -3$

2) $2 - m - 1 = 0$

3) $-2a - 3a = 5$

4) $3 = 1 + x - 1$

5) $-60 = 4(1 + 4x)$

6) $-3(2 + 4p) = 42$

7) $-4(-3 - 3k) - 4 = 56$

8) $-\frac{3}{17}(4x - 1) = 3$

9) $-1368 = 36(v - 28)$

10) $4 + 9(7 + 5n) = 517$

11) $43.98 = 3.9 + 4(3.3 + 2.4a)$

12) $-3.4(2.7a - 1.7) - 1.2a = 47.3$

13) $-7(2n + 5) - 5 = -89$

14) $9 = \frac{1}{2}(-2 + 5n)$

15) $7(8b + 6) = -182$

16) $121 = -5 + 6(-4v + 5)$

17) $-91 = -6(-1 + 4n) - 1$

18) $6(-24x + 4) = 96$

Application And Extension

Solve the following equations for the unknown variable:

1. $\frac{1}{3}(d+3)=5$

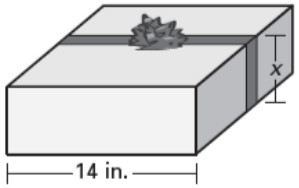
2. $23 = -4m + 2 + m$

Target Heart Rate The target heart rate is the heartbeat rate during aerobic exercise that provides a benefit to your heart. The target heart rate for a person exercising at 70% intensity is given by the equation y = 0.7(200 - x) where y is the target heart rate in beats per minute and x is the person's age in years.

3. How old is a person with a target heart rate of 133 beats per minute?

4. How old is a person with a target heart rate of 126 beats per minute?

5. ***Wrapping a Package*** It takes 70 inches of ribbon to make a bow and wrap the ribbon around a box. The bow takes 32 inches of ribbon. The width of the box is 14 inches. What is the height of the box?



Quick Review	1. Multiply: $\frac{3}{2}\cdot\frac{14}{15}$	2. Evaluate if x = -5 and y = -1 -x - y	3. Simplify: $\frac{-2-35}{-4+5}+36$
Coming Up	1. Distribute: - (-x - 1)	2. Simplify: -x – (y – 3x)	3. Plot (3, 0)