Reviewing multi-step equations.
You will need your notebook to copy in some examples.

You will also need a piece of scratch paper to turn in work on one problem in this slideshow.

Copy both of these examples into your notes.

Combining terms can help solve equations.

Solve: $5n + 6 + 3n = 22$

$5n + 3n + 6 = 22$

$8n + 6 = 22$

$8n + 6 - 6 = 22 - 6$

$8n = 16$

$\frac{8n}{8} = \frac{16}{8}$

$n = 2$

Check: $5n + 6 + 3n = 22$

$5(2) + 6 + 3(2) \stackrel{?}{=} 22$

$22 = 22$ ✔

Sometimes you need to distribute a term in order to simplify.

Solve: $4(x + 2) = 28$

$4x + 8 = 28$

$4x = 20$

$\frac{4x}{4} = \frac{20}{4}$

$x = 5$

Check: $4(n + 2) = 28$

$4(5 + 2) \stackrel{?}{=} 28$

$28 = 28$ ✔

1 EXAMPLE Solve $2c + 2 + 3c = 12$.

$2c + 2 + 3c = 12$

$2c + 3c + 2 = 12$ ← Commutative Property

$5c + 2 = 12$ ← Combine like terms.

$5c + 2 - 2 = 12 - 2$ ← Subtract 2 from each side.

$5c = 10$ ← Simplify.

$\frac{5c}{5} = \frac{10}{5}$ ← Divide each side by 5.

$c = 2$ ← Simplify.

It is easy when the numbers are positive. When you begin working with negatives, you need to remember your integer rules

Solve the following equations.

1. $2m + 4 - 8m = 28$

2. $2(f - 1) + f = 37$

3. $4.5(4x - 12) = 144$

This is your exit ticket problem to hand in on a piece of scratch paper. Be sure to put your name on your scratch paper, Work it out on your own now.
Then you have time to begin your homework.

1. Solve $-15 = 5b + 12 - 2b + 6$.

Name _____ Class _____ Date _____

Reteaching 2-3

Solving Multi-Step Equations

Combining terms can help solve equations.

Solve: $5n + 6 + 3n = 22$
$5n + 3n + 6 = 22$ ← Commutative Property
$8n + 6 = 22$
$8n + 6 - 6 = 22 - 6$
$8n = 16$
$\frac{8n}{8} = \frac{16}{8}$
$n = 2$

Check: $5n + 6 + 3n = 22$
$5(2) + 6 + 3(2) \stackrel{?}{=} 22$
$22 = 22$ ✔

Sometimes you need to distribute a term in order to simplify.

Solve: $4(x + 2) = 28$
$4x + 8 = 28$ ← Distributive Property
$4x = 20$
$\frac{4x}{4} = \frac{20}{4}$
$x = 5$

Check: $4(n + 2) = 28$
$4(5 + 2) \stackrel{?}{=} 28$
$28 = 28$ ✔

Solve each equation. Check the solution.

1. $a - 4a = 36$
   $a =$ _____
2. $3b - 5 - 2b = 5$
   $b =$ _____
3. $5n + 4 - 8n = -5$
   $n =$ _____
4. $12k + 6 = 10$
   $k =$ _____
5. $3(x - 4) = 15$
   $x =$ _____
6. $y - 8 + 2y = 10$
   $y =$ _____
7. $3(s - 10) = 36$
   $s =$ _____
8. $-15 = p + 4p$
   $p =$ _____
9. $2g + 3g + 5 = 0$
   $g =$ _____
10. $6c + 4 - c = 24$
    $c =$ _____
11. $3(x - 2) = 15$
    $x =$ _____
12. $4y + 9 - 7y = -6$
    $y =$ _____
13. $4(z - 2) + z = -13$
    $z =$ _____
14. $24 = -2(b - 3) + 8$
    $b =$ _____
15. $17 = 3(g + 3) - g$
    $g =$ _____