

Solving Equations with Like Terms and Distributive Property

GOAL: To isolate the variable

- 1) Do any distribution.
- 2) Combine any like terms on the same side.
- 3) Solve as two - step equation.

1) Combine like terms.	$3x - 6 - 8x = 24$
2) Add 6 to both sides.	$-5x - 6 = 24$
	$-5x = 30$
3) Divide each side by -5.	$\frac{-5x}{-5} = \frac{30}{-5}$
4) The variable is now isolated.	$x = -6$

1) Distribute the 8.	$8(x - 2) = -32$
2) Add 16 to both sides.	$8x - 16 = -32$
	$8x = -16$
3) Divide each side by 8.	$\frac{8x}{8} = \frac{-16}{8}$
4) The variable is now isolated.	$x = -2$

1) Distribute the 1/3.	$(1/3)(6x + 9) + 4x = 21$
2) Combine like terms.	$2x + 3 + 4x = 21$
3) Subtract 3 from both sides.	$6x + 3 = 21$
4) Divide each side by 6.	$6x = 18$
5) The variable is now isolated.	$x = 3$

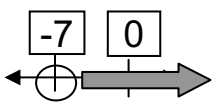
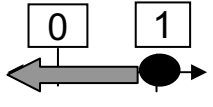
Equations with Like Terms and Distributive Property

1 $14x + 35 - 13x = 42$	11 $3(x + 8) = 30$
2 $5x - 31 + 2x = 4$	12 $5(x + 6) = 45$
3 $14x - 34 - 5x = 11$	13 $-3(x - 8) = 30$
4 $8x + 32 - 11x = -4$	14 $7(x - 4) = 42$
5 $3x - 48 + 18x = -6$	15 $4(x + 8) = 108$
6 $43x - 83 - 7x = 25$	16 $2(x - 8) = 26$
7 $10x + 32 - 50x = -8$	17 $8(x - 8) = 24$
8 $32x - 65 + 23x = 45$	18 $9(x + 3) = -36$
9 $87x - 54 - 42x = 36$	19 $12(x - 4) = 60$
10 $18x - 73 + 33x = 80$	20 $4(x + 6) = -96$

Equations with Like Terms and Distributive Property

- ① _____ One of two numbers is five more than the other. The sum of the numbers is -17. Find the numbers.
- ② _____ One number is eight times another. Their sum is 99. Find the numbers.
- ③ _____ One of two numbers is one-third of the other number. The sum of the numbers is -28. Find the numbers.
- ④ _____ The sum of two numbers is 13. One number is nine less than the other. Find the numbers.
- ⑤ _____ The sum of four consecutive numbers is -18. What are the numbers?
- ⑥ _____ One number is two more than another number. The sum of the larger number and twice the smaller number is -55. Find the numbers?

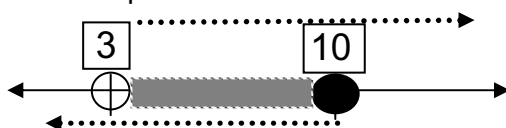
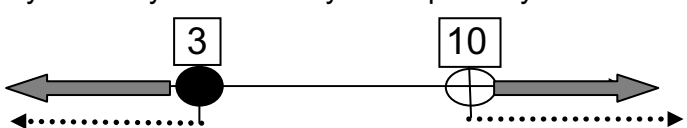
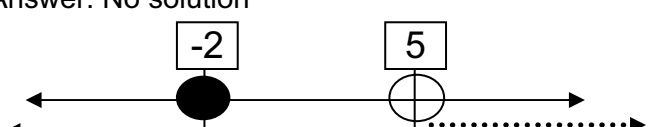

Solve inequalities just like equations.

$x + 3 > -4$ $\begin{array}{r} -3 \quad -3 \\ x > -7 \end{array}$ <p>This reads as "x is greater than -7".</p>  <p>If the sign does not have a line underneath, then the circle is open.</p> <p>Since x is greater than -7, shade where the numbers are larger than -7 (to the right of the circle). The open circle indicates that number is not included in the answer.</p>	$2x - 6 \leq -4$ $\begin{array}{r} +6 \quad +6 \\ 2x \leq 2 \\ x \leq 1 \end{array}$ <p>This reads as "x is less than or equal to 1."</p>  <p>If the sign does have a line underneath, then the circle is closed.</p> <p>Since x is less than or equal to 1, shade where the numbers are equal to 1 (circle) or less than 1 (to the left of the circle). The closed circle indicates the number is included in the answer.</p>
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When multiplying or dividing each side by a negative number, the inequality sign flips.

$\frac{-3x}{-3} > \frac{-12}{-3}$ <p>Dividing by "-3"</p> $x < 4$ <p>Notice the sign change!</p>	$-4x + 8 \geq 16$ $\begin{array}{r} -8 \quad -8 \\ -4x \geq 8 \\ \frac{-4x}{-4} \geq \frac{8}{-4} \\ x \leq -2 \end{array}$ <p>Notice the sign change!</p>
$\frac{3x}{3} < \frac{-12}{3}$ <p>Dividing by "+3"</p> $x < -4$ <p>Notice there is NO sign change here. (Did not divide by a negative.)</p>	$4x + 8 \leq -16$ $\begin{array}{r} -8 \quad -8 \\ 4x \leq -24 \\ \frac{4x}{4} \leq \frac{-24}{4} \\ x < -6 \end{array}$ <p>Notice NO sign change here!</p>

Compound Inequalities

<p>"AND" inequalities</p> $x > 3 \text{ and } x \leq 10 \quad \text{*also } 3 < x \leq 10$ <p>Shade both on the same number line. Their overlap is the answer.</p> 	<p>"OR" Inequalities</p> $x > 10 \text{ or } x \leq 3$ <p>Shade both on the same number line. They will likely not have any overlap. They do not need it</p> 
<p>Special Case for "AND" inequalities:</p> $x \leq -2 \text{ AND } x > 5$ <p>No overlap occurs. Answer: No solution</p> 	<p>Special Case for "OR" inequalities:</p> $x < 10 \text{ or } x \geq 3$ <p>Entire line is contained. Answer: All solutions</p> 

Inequalities

Graph both on the same number line. Some may have "all solutions" or "no solution".

$1 \quad 3x < 9 \quad \text{and} \quad 10 \geq -5x$	$6 \quad 3x \leq 9 \quad \text{or} \quad 10 > -5x$
$2 \quad -t > 4 \quad \text{and} \quad t - 10 \leq -16$	$7 \quad -t \geq 4 \quad \text{or} \quad t - 10 < -16$
$3 \quad 2 < s - 8 \quad \text{and} \quad -5 \geq s - 1$	$8 \quad 2 \leq s - 8 \quad \text{or} \quad -5 > s - 1$
$4 \quad 5 + z > 4 \quad \text{and} \quad 7z \leq -14$	$9 \quad 5 + z \geq 4 \quad \text{or} \quad 7z < -14$
$5 \quad n - 2 > 3 \quad \text{and} \quad 3n \leq 21$	$10 \quad n - 2 \geq 3 \quad \text{or} \quad 3n < 21$

Inequalities

$1 \quad 18x < -72$	$9 \quad x - 2 > 8$
$2 \quad -22x > 176$	$10 \quad x + 53 < -32$
$3 \quad \frac{3x - 1}{8} - \frac{(7x + 3)}{4} < \frac{6x + 11}{10}$	$11 \quad \frac{5x + 4}{3} - \frac{(2x + 7)}{6} < \frac{4x + 1}{9}$
$4 \quad \frac{3x - 1}{4} - \frac{(5x + 7)}{8} \geq \frac{2x + 3}{2}$	$12 \quad \frac{x - 3}{5} + \frac{4x - 5}{10} > \frac{8x - 6}{15}$
$5 \quad 33 + x < 81 - 2x$	$13 \quad 34 \geq -58 + x$
$6 \quad -221 + 7x \geq -18x + 29$	$14 \quad -21 + 6x < 12x + 39$
$7 \quad .7x + .2(x - 1) > .8x$	$15 \quad .1(x - 2) + .9(x - 2) \leq 2x$
$8 \quad 423 - 25x \geq 4(6x - 2) - 50x$	$16 \quad .7x + .6x + .5x + .4x < 8.8$

Solving Absolute Value Equations

$ x = 9$ $x = 9$ OR $x = -9$ Since the absolute value bars always create a positive answer, originally x could have been a positive or negative.	$ x - 5 = 14$ Create two equations: 1) one with the positive answer 14 2) one with the negative answer -14 $x - 5 = 14$ OR $x - 5 = -14$ Solve each on separately. $x = 19$ OR $x = -9$	$3 x + 8 - 9 = 3$ Isolate the absolute value. 1) add 9 to both sides $3 x + 8 = 12$ 2) divide each side by 3 $ x + 8 = 4$ Now create the two equations. $x + 8 = 4$ OR $x + 8 = -4$ $x = -4$ OR $x = -12$
If the isolated absolute value equals a negative number, the answer is NO SOLUTION.		$ x = -3$

Solving Absolute Value Inequalities

LESS THAN = "AND" inequality $ x - 3 \leq 9$ Create two inequalities: 1) one with the positive answer and the given sign 2) one with the negative answer and the given sign FLIPPED $x - 3 \leq 9$ AND $x - 3 \geq -9$ $x \leq 12$ AND $x \geq -6$	GREATER THAN = "OR" inequality $4 x - 5 - 4 > 16$ Isolate the absolute value. $4 x - 5 > 20$ $ x - 5 > 5$ $x - 5 > 5$ OR $x - 5 < -5$ $x > 10$ OR $x < 0$
Remember to flip the sign when isolating the variable if multiplying or dividing by a negative. This will change the "AND" inequality to an "OR" inequality or vice versa.	

Special Cases

If an absolute value inequality is less than a negative number, the answer is NO SOLUTION.	
$ x - 3 \leq -9$	NEVER TRUE
If an absolute value inequality is greater than a negative number, the answer is ALL SOLUTIONS.	
$ x - 3 \geq -1$	ALWAYS TRUE

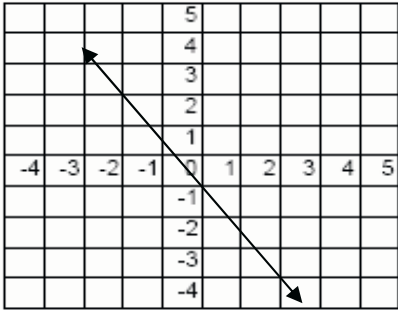
Absolute Value Equations and Inequalities

$1 \quad -3 x - 4 + 5 \geq -7$	$6 \quad -4 x + 9 - 5 < -9$
$2 \quad 6 x + 8 + 3 > 15$	$7 \quad -6 x + 3 - 3 \leq -15$
$3 \quad \frac{-2}{3} x + 3 + 11 \leq 13$	$8 \quad \frac{2}{3} x - 3 - 11 \geq 13$
$4 \quad \frac{4}{3} 2x + 6 + 8 \leq 32$	$9 \quad \frac{-4}{3} 2x + 6 + 8 > -32$
$5 \quad -2 x + 8 + 7 > -7$	$10 \quad \frac{-1}{2} -2x + 6 + 7 \leq 23$

Graphing II - Slope-Intercept Form

Find the slope and y-intercept from the graph and write the equation in $y = mx + b$ form.

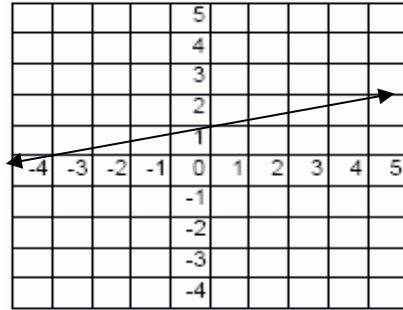
1 $y =$



slope _____

y - int _____

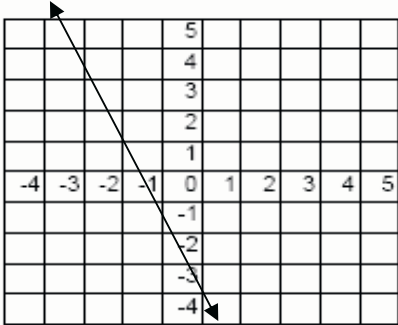
5 $y =$



slope _____

y - int _____

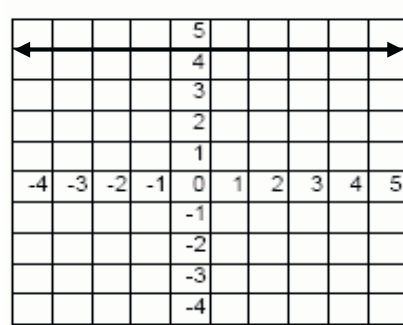
2 $y =$



slope _____

y - int _____

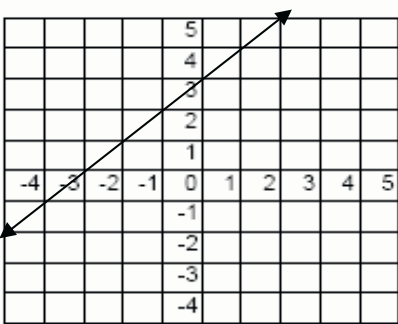
6 $y =$



slope _____

y - int _____

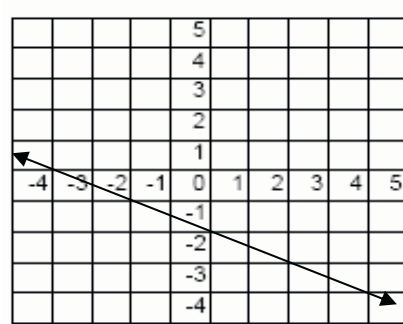
3 $y =$



slope _____

y - int _____

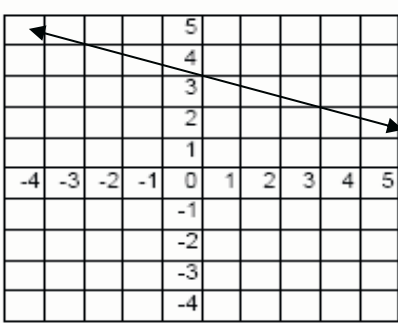
7 $y =$



slope _____

y - int _____

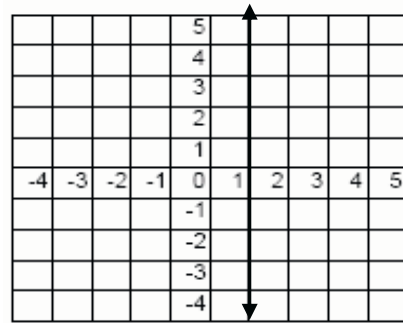
4 $y =$



slope _____

y - int _____

8 $x =$



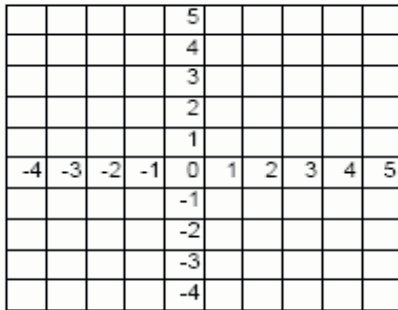
slope _____

x - int _____

Graphing II - Slope-Intercept Form

Find the x-intercept and y-intercept for each and graph.

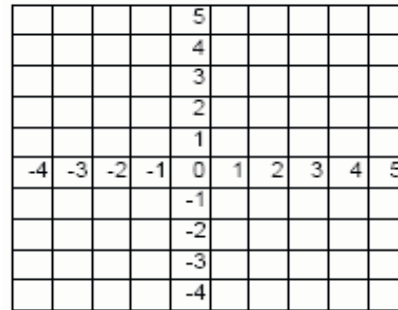
1 $5x - 4y = -20$



x - int _____

y - int _____

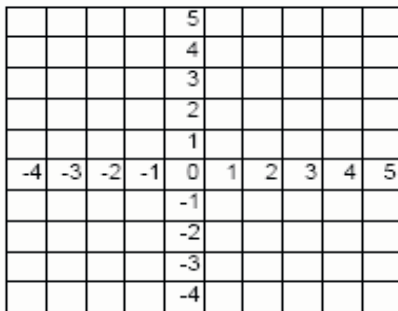
5 $2x + 3y = 6$



x - int _____

y - int _____

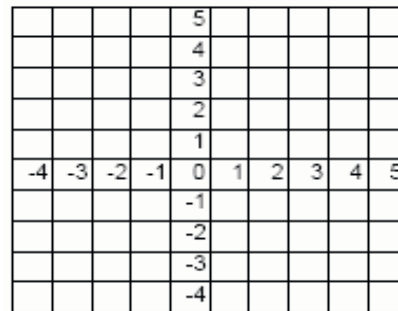
2 $5x + 2y = -10$



x - int _____

y - int _____

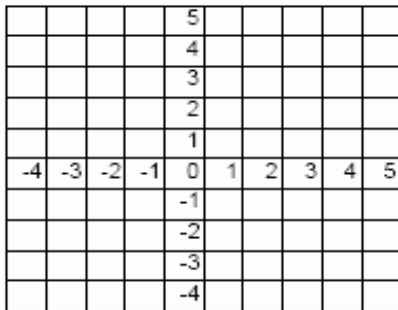
6 $3x - 6y = 12$



x - int _____

y - int _____

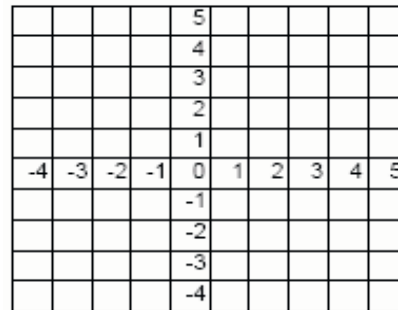
3 $4x + 4y = -4$



x - int _____

y - int _____

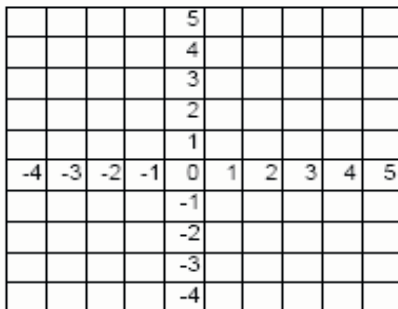
7 $7x - 14y = 28$



x - int _____

y - int _____

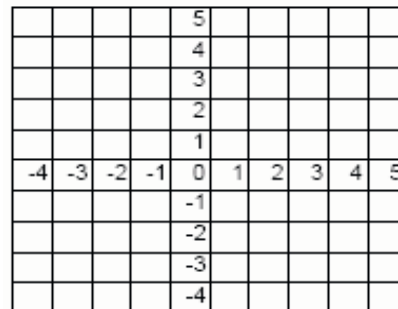
4 $3x - 4y = -12$



x - int _____

y - int _____

8 $2x + y = 4$



x - int _____

y - int _____

Exponents I

Simplify. Final answers should have all exponents positive.

1 $a^2 \bullet a^3 = a^5$ When multiplying the same base, add the exponents.	11 $3^2 \bullet 3^3 = 3^5$ If the base is a number, treat as if it is a variable.	21 $x^3 \bullet y^{-1} \bullet x^9 =$
2 $a^3 \bullet a^3 =$	12 $2a^3 \bullet 6a^7 = 12a^{10}$ Multiply any coefficients together even if they have different bases.	22 $4x^0 \bullet (8y)^{-1} \bullet 2x^5 =$
3 $a^4 \bullet a^3 =$	13 $2a^3 \bullet 6b^7 \bullet -4a^2 =$ $-48a^5b^7$	23 $(6r^4s^3)(9rs^{-2}) =$
4 $a^{-2} \bullet a^3 =$	14 $5^2 \bullet 5^{-4} =$	24 $(-2d^3e^4)(6d^{-4}e^{-9}) =$
5 $a^{-1} \bullet a^3 =$	15 $-9c^7 \bullet 6c^5 =$	25 $5^7 \bullet 5^{-2} \bullet 5^x =$
6 $a^{-3} \bullet a^3 =$	16 $11g^2 \bullet 8g^8 =$	26 $a^{-4} \bullet a^x \bullet a^{(6x+2)} =$
7 $a^{-3} \bullet a^0 =$	17 $9^2 \bullet 9^{-4} \bullet 9^6 =$	27 $\frac{-1}{a^{-7} \bullet a^3} =$
8 $a^{-7} \bullet a^3 =$	18 $8^{-6} \bullet 8^{-4} =$	28 $\frac{2u}{4b^{-7} \bullet 6b^5} =$
9 $a^{-12} \bullet a^3 =$	19 $6y^{15} \bullet 9y^{-8} =$	29 $\frac{-a}{5^0 \bullet 5^2} =$
10 $a^{-x} \bullet a^3 =$	20 $\frac{3p^4}{(-5m^4)(-2m^{-6})} =$	30 $\frac{4}{(8p^6)(5p^{-3})} =$

Exponents I

Simplify. Final answers should have all exponents positive.

1 $(-2d^3e^4)(6d^{-4}e^{-9}) =$	11 $(2r^{-1}s^3)^{-2} =$
2 $a^{-4} \bullet a^{4x} \bullet a^{(9x+2)} =$	12 $(9r^{-8}s^{4a})^2 =$
3 $7p^{-7} \bullet (5p^4)^2 =$	13 $a^5x^7 \bullet a^3x^{-2} \bullet x^4 =$
4 $-9c^7 \bullet 6c^5 =$	14 $11g^2 \bullet 8g^8 =$
5 $(5mp^2)(10^{-1}m^{-7}p^6) =$	15 $(4g^{-4}h^{11})^{-2} =$
6 $(-6)^2 \bullet (-3)^2 =$	16 $(y^{5x})^{-2} =$
7 $\frac{2u}{4b^{-7} \bullet 6b^5} =$	17 $\frac{6f^0}{g^{-1}} =$
8 $\frac{3a^{-2}}{b^{-8}} =$	18 $\frac{(2w^4)^3}{(6k^6)^2} =$
9 $\frac{3p^4}{(-5m^4)(-2m^{-6})} =$	19 $\frac{-1}{b^{-7} \bullet b^3} =$
10 $\frac{-2^0d^3e^{-2}}{3^{-1}f^3} =$	20 $\frac{(5x^6)^{-2}}{(3p^2)^{-2}} =$

Multiplying and Factoring with Monomials

Factor out the greatest common factor. (This is the reverse of multiplying by the monomial.)

<p>1 $x^2 - 5x = x(x - 5)$</p> <p>The GCF of the two terms is "x". Put the GCF on the outside of the parentheses and divide each term by the GCF. The remainders are left in the parentheses. As a check you can always multiply back and see if the answer is correct.</p>	<p>11 $x^2 - 7x = x(x - 7)$</p>
<p>2 $12x + 24 =$</p>	<p>12 $5x - 10y =$</p>
<p>3 $-10a - 25 = -5(2a + 5)$ If the first term is negative, factor a negative out also. The GCF of the two terms is -5. $(-10a)/(-5) = 2a$ $(-25)/(-5) = 5$</p>	<p>13 $8ab - 12 =$</p>
<p>4 $2x^2 + 9xy =$</p>	<p>14 $2x^2 + 4xy =$</p>
<p>5 $-6a^2 + 5ab =$</p>	<p>15 $30a^2 - 5ab =$</p>
<p>6 $-8a^2 - 4ab =$</p>	<p>16 $-12ab + 10b^2 =$</p>
<p>7 $8x^3 - 12x =$</p>	<p>17 $4ax^2 - 12ax =$</p>
<p>8 $25a^2b - 10ab =$</p>	<p>18 $24a^2b^3 - 8ab^2 = 8ab^2(3ab - 1)$ The GCF is $8ab^2$. The GCF always has the highest exponent available from both terms on each variable. When the GCF is the same as one term, 1 is left after division.</p>
<p>9 $-6cx^2 + 15cx =$</p>	<p>19 $10cx^2 + 15c^3x =$</p>
<p>10 $-9c^2x - 15c^3x =$ The GCF should have the largest number and exponents available with still able to divide each term. Here it is $-3c^2x$.</p>	<p>20 $18c^5x - 12c^3x^2 =$</p>

Factoring Differences of Squares and Simple Trinomials

List pairs of numbers that have this as a:

	<u>Product</u>	<u>Sum</u>	<u>Trinomial</u>	<u>Factored Trinomial</u>
1	18: 9&2, 3&6, 18&1	11: 9 & 2	$x^2 + 11x + 18$	$(x + 9)(x + 2)$
2	5: 1&5, -1&-5	-6: -1 & -5	$x^2 - 6x + 5$	$(x - 1)(x - 5)$
3	6	5	$x^2 + 5x + 6$	()()
4	12	8	$x^2 + 8x + 12$	()()
5	12	-7	$x^2 - 7x + 12$	()()
6	9	6	$x^2 + 6x + 9$	()()
7	15	-8	$x^2 - 8x + 15$	()()
8	14	9	$x^2 + 9x + 14$	()()
9	18	-9	$x^2 - 9x + 18$	()()
10	20	-9	$x^2 - 9x + 20$	()()
11	21	10	$x^2 + 10x + 21$	()()
12	24	-14	$x^2 - 14x + 24$	()()
13	24	11	$x^2 + 11x + 24$	()()
14	36	-20	$x^2 - 20x + 36$	()()
15	36	12	$x^2 + 12x + 36$	()()
16	6	-7	$x^2 - 7x + 6$	()()
17	14	15	$x^2 + 15x + 14$	()()
18	36	-13	$x^2 - 13x + 36$	()()
19	100	29	$x^2 + 29x + 100$	()()
20	12	-13	$x^2 - 13x + 12$	()()

Elimination:

Goal: To get one variable on each equation to have the same coefficient but opposite signs

a) $x + 2y = 4$

b) $3x + y = 7$

a) $\bullet -3:$ $-3x - 6y = -12$

b) $3x + y = 7$ +

You can eliminate the x's by multiplying equation 'a' by -3.

$$\begin{array}{r} -5y = -5 \\ y = 1 \end{array}$$

Since the x's have the same coefficient, add down to ELIMINATE them.

b) $3x + y = 7$

$3x + (1) = 7$

$3x = 6$

$x = 2$

Now plug 'y' into either equation to solve for x.

$(2, 1)$

Write the solution as an ordered pair.

a) $4x - 7y = -5$

b) $3x - 2y = -7$

You can eliminate the x's by multiplying both equations by a number to create 12 for the 'x' coefficient.

a) $\bullet 3:$ $12x - 21y = -15$

b) $\bullet -4:$ $-12x + 8y = 28$ +

Now add down.

$$\begin{array}{r} -13y = 13 \\ y = -1 \end{array}$$

a) $4x - 7y = -5$

$4x - 7(-1) = -5$

$4x + 7 = -5$

$4x = -12$

$x = -3$

Now plug 'y' into either equation to solve for x.

$(-3, -1)$

Write the solution as an ordered pair.

Systems of Equations I - Graphing and Elimination

Solve by elimination.

Write the solution as an ordered pair: (x, y).

$\begin{aligned} 1 \quad & 7x - 4y = 15 \\ & 14x - 8y = 30 \end{aligned}$	$\begin{aligned} 5 \quad & 3x + 7y = -33 \\ & 5x - 2y = -14 \end{aligned}$
$\begin{aligned} 2 \quad & 6x - 5y = -2 \\ & 2x + 7y = -18 \end{aligned}$	$\begin{aligned} 6 \quad & 3x - 4y = 27 \\ & 3x + 4y = 3 \end{aligned}$
$\begin{aligned} 3 \quad & 4x + 3y = 7 \\ & 4x + 3y = -7 \end{aligned}$	$\begin{aligned} 7 \quad & 15x + 6y = 13 \\ & 12x - 10y = 3 \end{aligned}$
$\begin{aligned} 4 \quad & x + 4y = 1 \\ & 2x - 5y = 15 \end{aligned}$	$\begin{aligned} 8 \quad & 2x - 5y = 3 \\ & 4x - 10y = 6 \end{aligned}$

Systems of Equations III - Word Problems

Set up the equations and solve using either elimination or substitution.

1	<p>In Red River, it takes Greg 3 hours to either go 30 km downstream (with the current) or go 18 km upstream (against the current). Find the his speed in still water and the current's speed.</p> <p style="text-align: right;">$D = RT$</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 35%;">Greg's speed in still water = g</td> <td style="width: 20%;">upstream:</td> <td style="width: 45%;">$18 = (g - c)3$</td> </tr> <tr> <td>current's speed = c</td> <td>downstream:</td> <td>$30 = (g + c)3$</td> </tr> </table> <p>downstream speed: $g + c$ (The current makes Greg go faster.) upstream speed: $g - c$ (The current slows Greg down.)</p>	Greg's speed in still water = g	upstream:	$18 = (g - c)3$	current's speed = c	downstream:	$30 = (g + c)3$
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2	<p>In Muddy Dog Creek, my dad can row 60 km downstream in 4 hours, but it takes him 6 hours to row the same distance upstream. Find the his speed in still water and the current's speed.</p>						
3	<p>Nicole flew her small airplane 900 km in 5 hours with the wind. She flew back 700 km in 7 hours against the wind. Find the her speed in still air and the wind's speed.</p>						
4	<p>A jet liner traveled 3000 km in 5 hours flying with the wind. The return trip took 6 hours 15 minutes flying against the wind. Find the its speed in still air and the wind's speed.</p> <p style="text-align: right;">*Hint: Change minutes into a partial hour.</p>						
5	<p>In Bird River, Natalie can row 50 km downstream in 5 hours, but she can only go 25 km upstream in the same amount of time. Find the her speed in still water and the current's speed.</p>						

Simplifying Rational Expressions

$$\frac{4r - 8}{r^2 - 4} = \frac{4(r - 2)}{(r + 2)(r - 2)} = \frac{4}{r + 2}$$

Do any possible factoring, then reduce.

When you are adding or subtracting fractions, you must find the lowest common denominator.

$$\frac{8y^3}{12xy} \div y^3 - 4y^2 = \frac{8y^3}{12xy} \cdot \frac{1}{y^3 - 4y^2}$$

Flip the fraction, then reduce.

$$\frac{8y^3}{12xy} \cdot \frac{1}{y^2(y - 4)} = \frac{2}{3x(y - 4)}$$

$$\frac{4}{5x} + \frac{7}{10y} = \frac{4(2y)}{10xy} + \frac{7(x)}{10xy} = \frac{8y + 7x}{10xy}$$

LCD: 10xy

Multiply the numerator by whatever you multiply the denominator to create the LCD.

$$\frac{5}{x} + \frac{4x - 3}{x^2 + 3x + 2} - \frac{5}{x + 1} = \frac{5(x + 2)(x + 1) + x(4x - 3) - 5x(x + 2)}{x(x + 2)(x + 1)}$$

$$= \frac{5(x^2 + 3x + 2) + 4x^2 - 3 - 5x^2 - 10x}{x(x + 2)(x + 1)}$$

$$= \frac{4x^2 + 5x + 7}{x(x + 2)(x + 1)}$$

LCD: $x(x + 2)(x + 1)$

Solving Rational Equations

$$\frac{3}{x - 3} + 1 = \frac{x}{x + 4}$$

$$3(x + 4) + 2(x - 3)(x + 4) = x(x - 3)$$

$$3x + 12 + 1(x^2 + x - 12) = x^2 - 3x$$

Multiply each item by the LCD: $(x - 3)(x + 4)$.

Or convert all items to the same denominator, then cancel the denominators.

$$x^2 + 4x = x^2 - 3x$$

Make sure your answer will not create a zero in the original denominators.

$$7x = 0 \quad x = 0$$

Rational Expressions and Equations

Simplify.

1 $\frac{3a}{16a^2} + \frac{7}{20a}$	6 $\frac{10}{3b} - \frac{5}{b-2}$
2 $\frac{1}{r(r+2)} - \frac{1}{r^2}$	7 $\frac{3x}{x-5} - \frac{x}{x+2}$
3 $\frac{2}{r^2-4r} + \frac{3}{r}$	8 $\frac{3}{a^2+2a} + \frac{5}{a^2-4}$
4 $\frac{2x}{x+3} - \frac{x}{x+2}$	9 $\frac{10y}{3xy^2} - \frac{4}{5xy}$
5 $\frac{6}{2x+5} + \frac{3}{x-3}$	10 $\frac{4}{4x-3} + \frac{2}{x+2}$