Absolute Value Inequalities

Date:

Solve, graph, and write the solution in interval notation.

1. $|6x-10| \leq 34$

2. $-6|2v-6|+5<-79$

Relations & Functions

Date:

For each relation below: a) State the domain and range, and **b)** Determine whether it is a function

1. {(-1, 4), (0, 5), (1, 4), (2, 7)}

a) **b)**

2. {(-5, -2), (2, 1), (0, 3), (-5, -4)}

a) **b)**

3. $y = 2x - 7$

a) **b)**

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

a) **b)**

Evaluating Functions

Date:

Given $f(x) = 8x - 9$, $g(x) = -x^2 + 7x$ and $h(x) = |2 - 4x|$, find each value.

1. $g(8)$

2. $h(13) - f(-1)$

3. $f(3y - 1)$

4. $g(a + 2)$

5. If $f(x) = -23$, find x.

Slope-Intercept & Standard Form

Date:

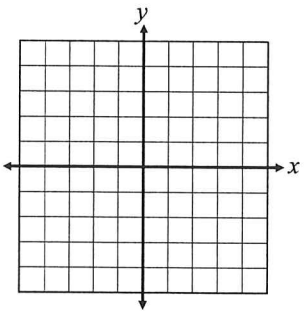
Write each equation in standard form:

1. $12y = 9x - 30$

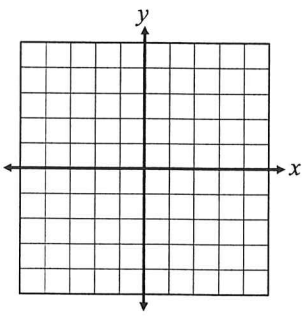
2. $\frac{2}{9}x - \frac{5}{6}y = 2$

Write in slope-intercept form, then graph.

3. $x - 5y = 20$



4. $15x = -10y$

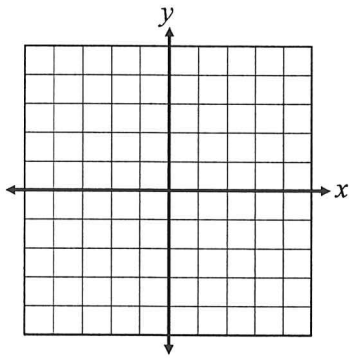


x- and y-Intercepts

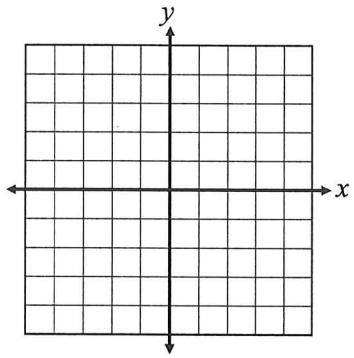
Date:

Find the x- and y-intercepts of each equation, then graph.

1. $y = -6x + 2$



2. $5x = 8y + 20$



Point-Slope & Two Points

Date:

Write a linear equation with the given information.

1. Passes through (-2, 11) with a slope of -4

2. Passes through (2, -6) and parallel to the line $2x - 3y = 15$.

3. Passes through the points (-9, 7) and (3, -2).

Linear Equations Applications

Date:

Define variables, set up an equation, then solve.

1. Caitlyn is going away to college and will need to rent a truck to help move. The cost of the truck is $35 plus $0.79 per mile. If her college is 85 miles away and she budgeted $100 for the rental, will she have enough money?

2. Max works two jobs, one at the zoo and the other at the library. He drives 24 miles round-trip to the zoo and 9 miles round-trip to the library. He never works two jobs in the same day. His car has a 15 gallon gas tank and gets 20 miles per gallon. If his tank is now empty and he has worked 12 days at the library since last filling up, how many days did he work at the zoo?

Linear Regression

Date:

On October 3rd, Holly invested $2500 in some stocks. The table below shows the value of her investment on certain days since investing.

day	Oct. 3	Oct. 6	Oct. 11	Oct. 16	Oct. 20
value	$2500	$2509.12	$2525.74	$2539.02	$2548.55

1. Use linear regression to find an equation of best fit.

2. Find the approximate value of her investment on Oct. 31st.

3. How many days will it take her investment to reach a value of $3,000?

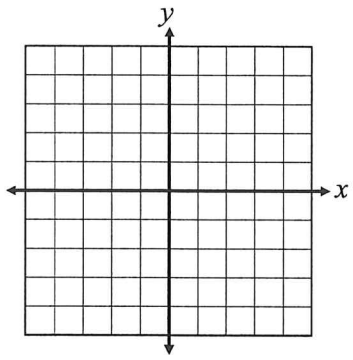
Solving Systems by Graphing & Substitution

Date:

1. Solve by graphing.

$3x + 4y = -16$

$2x = y - 7$



2. Solve by substitution.

$2x + 7y = -23$

$5x - y = -39$

Solving Systems: by Elimination

Date:

Solve each system by elimination.

1. $x - 4y = -14$

$6x + 8y = -12$

2. $6y = 2x + 4$

$7x + 14 = 21y$

Systems Applications

Date:

Kate bought 5 pounds of hamburger and 2 pounds of hotdogs and paid $28.50. Eric bought half the amount of hamburger and a fourth of the amount of hotdogs that Kate did and paid $12.50. Find the cost per pound of hamburgers and hotdogs.

Systems with Three Variables

Date:

Solve the following system:

$$x + 2y - 4z = 7$$
$$3x - y + 6z = -7$$
$$2x + 3y - z = 10$$

Three Variable Application

Date:

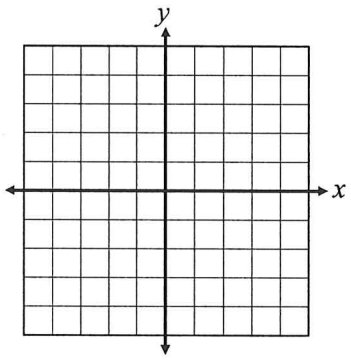
Jack has 63 pennies, dimes, and quarters worth $6.30. If the number of dimes is three less than the number of quarters, how many of each coin does he have?

Linear Inequalities & Systems

Date:

1. Graph the linear inequality.

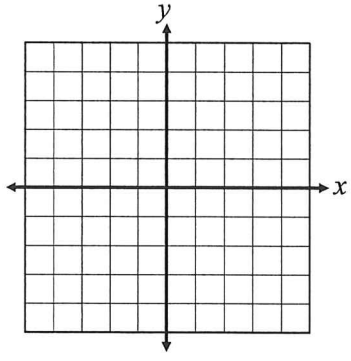
$4x - 5y \geq 10$



2. Graphing the system of linear inequalities.

$6x + 3y > 15$

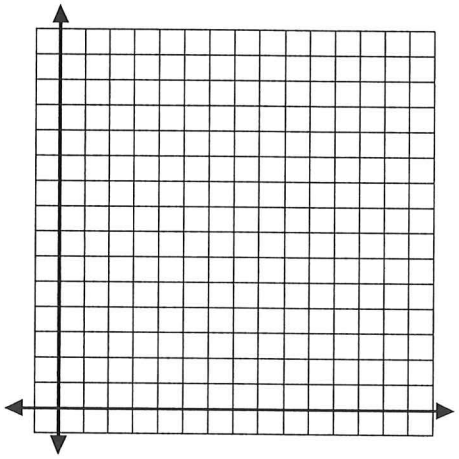
$y > -2$



Linear Inequalities Applications

Date:

It costs $20 per day to board a dog and $16 per day to board a cat. The kennel needs to make at least $800 per day to cover expenses, but can hold no more than 80 total animals. Write a system of inequalities, graph, and give two possible solutions to the number of dogs and cats they can board each day.



Linear Programming

Date:

Erica is making necklaces and bracelets to sell at the craft show. It takes her 3 hours to make a necklace and 2 hours to make a bracelet. She sells the necklaces for $18 and the bracelets for $15. She has 60 hours available this coming week to make the jewelry, and would like to make at least 25 total pieces of jewelry, with at least 2 being necklaces. How many of each should she make to maximize her profit?