

Write an expression OR equation that represents each of the following word problems. DO NOT SOLVE.

1) Michelle has 4 pairs of shoes less than her best friend Shawna. If Michelle has 11 pairs, how many pairs does Shawna have?

2) Francisco weighs 100 pounds less than three times his brother's weight. His brother weighs 80 pounds. Write an equation that would find out how much Francisco weighs.

3) Stacie has 10 pairs of shoes. She is going to buy 3 more each month. Write an equation that would find t, the total amount of shoes that she will have after m months.

Identifying Solutions of Linear Inequalities Algebraically. For each of the following, determine whether the given point is a solution to the given inequality. SHOW ALL WORK.

4) $(-2, 4); y < 2x + 1$

5) $(-2, -3); y \leq -2x + 4$

6) $(5, -9); 4x + 2y > 2$

YES NO

YES NO

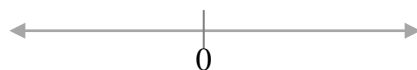
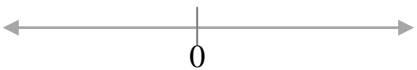
YES NO

Solve the inequality using inequalities AND Interval Notation. Graph your solution on a number line.

7) $x + 4 < 5$

8) $x - 4 \geq 5$

9) $1 \leq x - 8$



Inequality: _____ Int. Not: _____

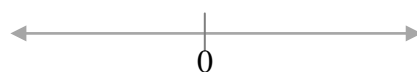
Inequality: _____ Int. Not: _____

Inequality: _____ Int. Not: _____

10) $x - 1\frac{1}{3} < -2\frac{1}{2}$

11) $-3x + 4 \geq -5$

12) $-\frac{1}{2}x < 4$



Inequality: _____ Int. Not: _____

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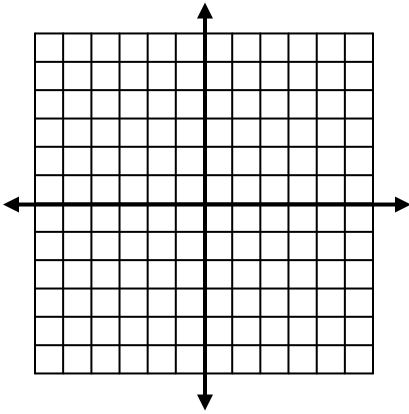
Inequality: _____ Int. Not: _____

13) Describe and correct the error in solving the inequality.

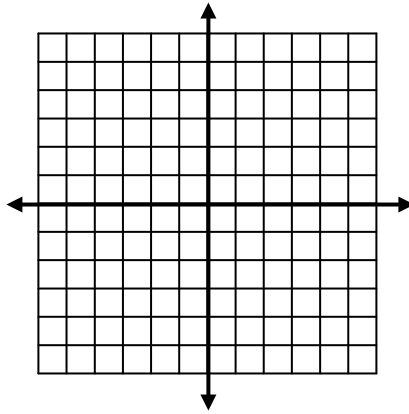
$-15x > 45$
 $\frac{-15x}{-15} > \frac{45}{-15}$
 $x > -3$

Graph and shade the inequality.

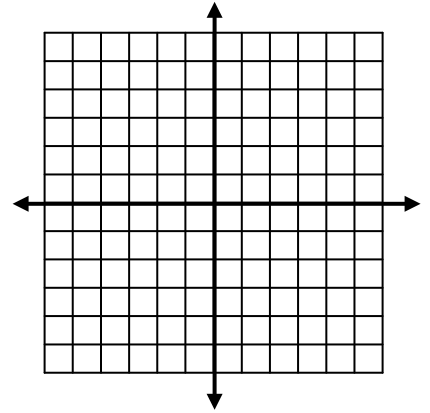
14) $2x + y < 5$



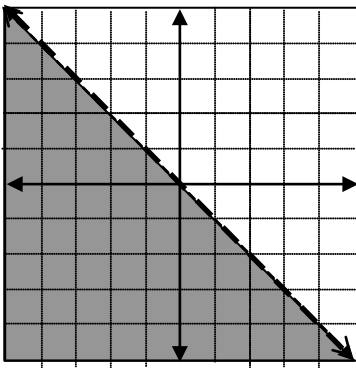
15) $9x + 9y \geq 0$



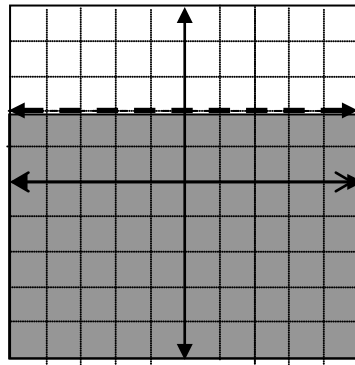
16) $3x - y \leq 4$



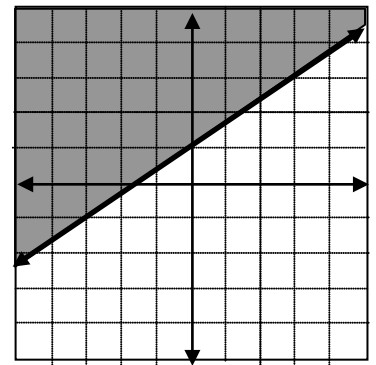
Write an inequality to represent each of the following graphs.



17) _____



18) _____



19) _____

20) Becky wrote $y \geq -\frac{1}{2}x - 1$ as the inequality represented by the graph below. Jon Jon wrote $y \leq -\frac{1}{2}x - 1$. Diane wrote $y \leq \frac{1}{2}x - 1$. Paul wrote $y \leq -2x - 1$. Which students are incorrect and explain each of their errors.

Becky: _____

Jon Jon: _____

Diane: _____

Paul: _____

