Warm-Up

Classify the following numbers using the sets of real numbers:

$-\sqrt{256}$ -11 $\sqrt{2}$ 0

Solve the inequality. Then graph it

$X - 5 > 13$ $12 \leq 4 + y$ $3x > 4$ $z/2 \leq 5$

$2m - 3 > 17$

Homework Check

Pg 168 # 17-20, Pg. 174 #13, 15, 23-25, 39, 41

Announcements

Tests handed back and test corrections

Multiplying and Dividing Inequalities

October 3, 2018

Today we are going to look at the multiplication and division properties of inequality

These properties work just like the properties of equality with one exception…

When you divide or multiply both sides by a negative number, you must flip the inequality sign.

Let’s watch a quick video to understand why this happens.

https://www.youtube.com/watch?v=Z_78URnJXBQ

Let's quickly do a few problems...

Solve and graph $\frac{3}{4} w > 3$

Solve and graph $-\frac{3}{4} w > 3$

Solve and graph $9y > 18$

Solve and graph $-9y < 18$

And a word problem...

A family is taking a cross country trip by car. They drive at an average speed of 55 mi/hr and their goal is to travel at least 400 mi/day. How many hours per day do they need to drive?

Multi-Step Inequalities

October 3, 2018

We solve multi-step inequalities just like we solve multi-step equations!

We use a combination of all properties of inequality to isolate the variable (and remember that multiplying and dividing by a negative will cause us to flip the sign!).

Remember, we are using reverse order of operations to solve.

1. $4x + 3 > -1$

2. $-2y + 5 \leq 15$

3. $\frac{2}{3}x - 4 < 8$

4. $3(b - 1) \geq 6$

5. $-\frac{1}{4}(a - 16) < 4$

6. $3y - 4 - 5y \leq 12$

7. $4t - 3 > 2t + 5$

8. $6(p - 2) \geq 9 - p$

9. $-\frac{1}{2}(x - 5) \leq x + 3$

“I have, who has” multi-step inequality Activity

You will work with your table groups!

Take a clean sheet of paper. Write “Start Card #1 - Who has $3(x-4)\geq 6$” then solve.

Find the answer on an “I Have Card” - label this card number two and put it next on your paper. Continue process until you reach the “End Card.” You should have no leftover cards.

Homework

Pg 181 #8, 10, 17, 19, 24

Pg. 190 # 9, 11, 14, 17, 25, 26, 29