

November 24th

Due Next Class: TEST

Unit 4: Inequalities

Lesson 4.5: Inequalities Test Review

Get Ready:

TEST ON MONDAY

Sam cuts a 10 m rope into two pieces.

How long is the longer piece?

How long is the shorter piece?



Inequalities SOS

Will inequalities give us one exact value as the answer?

Range of Solutions

Equations (=)

$$-5t + 2 > 2$$

$$\frac{-5t}{4} > \frac{0}{4}$$

$$-5t > 0$$

$$t < 0$$

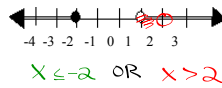
What is the difference?

$x > 8$ **$8 > x$**

x is greater than 8 8 is greater than x

$8 < x$ **$x < 8$**

Write the Inequality



4) $\frac{n}{3} > 1$ OR $8n < 8$

$\frac{n}{3} \geq 1$ $8n \leq 8$

$n \geq 3$ OR $n < 1$

12) $8m - 5 \leq 6 - 3m < 8m + 6$

$8m - 5 \leq 6 - 3m$ AND $6 - 3m < 8m + 6$

$+3m$ $+3m$ $+2m$ $+2m$

$11m - 5 \leq 6$ AND $6 \leq 11m + 6$

$+5$ $+5$ -6 -6

$11m \leq 11$ AND $0 \leq 11m$

$m \leq 1$ AND $0 \leq m$

Mr. Rogers is baking some cookies for his advisory. He has already spent \$9 on supplies but would also like to get candy. He **doesn't** want to spend **more than** \$23 on all of the treats. If each bag of candy costs \$1.25, then what is the most number of bags that Mr. Rogers can buy?



$$1.25x + 9 \leq 23$$

$$\frac{-9}{1.25} \quad \frac{-9}{1.25}$$

$$1.25x \leq 14$$

$$\frac{1.25x}{1.25} \leq \frac{14}{1.25}$$

$$x \leq 11.2$$

Mr. R can buy 11 bags of candy.

What does it mean for a point to be a solution to a linear inequality?

- ① a point on a solid line.
 - ② In the shaded region.
 - ③ Substitute the point for x & y into the inequality, it should make the inequality true.
- Graph algebraically

\geq	Solid	$>$	Above
\leq	Dashed	\leq	Below

$3x - y < -1$

$$\frac{-3x}{-1} \quad \frac{-3x}{-1}$$

$$-y < -3x - 1$$

$$y > 3x + 1$$

$(-2, 1)$	$(0, 1)$	$(2, 0)$
$y > 3x + 1$	$y > 3x + 1$	$y > 3x + 1$
$1 > 3(-2) + 1$	$1 > 3(0) + 1$	$0 > 3(2) + 1$
$1 > -6 + 1$	$1 > 0 + 1$	$0 > 6 + 1$
$1 > -5$	$1 > 1$	$0 > 7$
TRUE	False	False