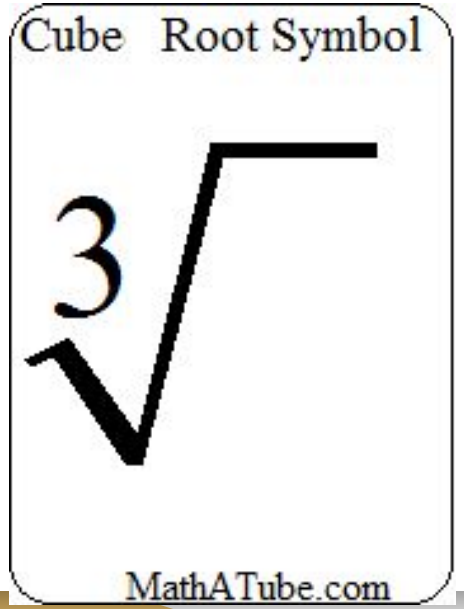
Warm-Up/Homework Check

Pull out your Cube Root Exploration homework and discuss it with your table group.



Brief Discussion about Cube Roots

$$\sqrt[3]{1} = 1 \text{ since } 1^3 = 1$$

$$\sqrt[3]{8} = 2 \text{ since } 2^3 = 8$$

$$\sqrt[3]{27} = 3 \text{ since } 3^3 = 27$$

$$\sqrt[3]{64} = 4 \text{ since } 4^3 = 64$$

$$\sqrt[3]{125} = 5 \text{ since } 5^3 = 125$$

Fourth Root? Fifth Root? …

Perfect Fourth

$1 = 1^4$

$16 = 2^4$

$81 = 3^4$

$256 = 4^4$

$625 = 5^4$

Fourth Root

$\sqrt[4]{1} = 1$

$\sqrt[4]{16} = 2$

$\sqrt[4]{81} = 3$

$\sqrt[4]{256} = 4$

$\sqrt[4]{625} = 5$

Perfect Fifth

$1 = 1^5$

$32 = 2^5$

$243 = 3^5$

$1024 = 4^5$

$3125 = 5^5$

Fifth Root

$\sqrt[5]{1} = 1$

$\sqrt[5]{32} = 2$

$\sqrt[5]{243} = 3$

$\sqrt[5]{1024} = 4$

$\sqrt[5]{3125} = 5$

Study shows racial segregation, child poverty rising in United States

Read the article attached in Google Classroom. Then respond using the sentence starters:

I was surprised by __ because __.

When I read __ it made me think of __.

My overall take-away from this article is __.

I think this will relate to today's math lesson because __.

3.1 - Graphing Inequalities

October 2, 2018

What do you already know about inequalities?

Students, write your response!

Discuss at your table: Inequalities

- What are inequalities? What does this word mean?
- What are some symbols we use for inequalities?

Inequalities-Definition from the text

Inequalities are mathematical sentences that use inequality symbols to compare the values of two expressions.

Graphing on a Number Line

How could we represent an inequality on a number line?

How would we represent x is less than 3?

What about x is less than or equal to 3?

Graphing an Inequality

Inequalities are represented on a number line by a ray.

If the inequality is **greater than or <u>equal to</u>** or **less than or <u>equal to</u>,** the end point of the ray is a closed circle.

If the inequality is just **greater than** or **less than**, the end point of the ray is an open circle.

Practice

Graph the following on a number line

Ex. 1: $x>6$

Ex. 2: $x\leq 12$

Ex. 3: $-6>x$

Ex 4: $13\leq b$

Extend your thinking

Graph the following on a number line

$4 < x \leq 7$

3.2 - Adding and Subtracting Inequalities

October 2, 2018

Adding and Subtracting Inequalities

Just like the 4 properties of equalities we talked about with equalities, there are **properties of inequalities**.

These function the same as the properties of equality.

Addition Property of Inequality

$X - 15 > -12$

$X - 15 +15 > -12 +15$

Practice-Addition Property of Inequality

$M - 11 \geq -2$

$R - 15 < 9$

Subtraction Property of Inequality

$T + 6 > -4$

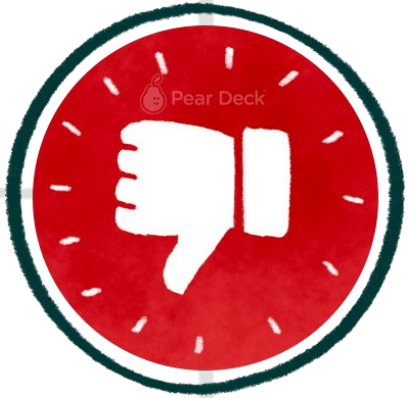
$T + 6 - 6 > -4 - 6$

Practice- Subtraction Property of Inequality

$-1 \geq y + 12$

$X + 9 < -3$

Drag your dot to show if you're ready to move on:



Students, drag the icon!

Stations!

Visit all stations! Posted around the room.

Homework

Pg. 168 # 17-20

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