## Warmup Created by Mr. Lischwe

## 8/(Michael Jordan's original number)

THIS WARMUP WILL GO ON A NOTECARD. (On your warmup page, you can just write "notecard")

Solve each equation.Write your solutions as x = \_\_\_\_.

- 1.  $x^2 = 64$
- 2.  $x^2 = -64$
- 3.  $x^3 = 64$
- 4.  $x^3 = -64$
- 5. Estimate  $\sqrt{76}$ . Your answer **must** be accurate to the nearest tenth. Show all of your work.



- Retake/EnrichmentWednesday
- If you want to do a retake tomorrow, you MUST let me know today. You will also have to meet with me either today or tomorrow.

Solve each equation. Write your solutions as x =\_\_\_\_. 1.  $x^2 = 64$  x = 8, -82.  $x^2 = -64$  No solution 3.  $x^3 = 64$  x = 44.  $x^3 = -64$  x = -45. Estimate  $\sqrt{76}$ .  $\approx 8.7$ 



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### What do we remember?

- What is the difference between **whole numbers** and **integers?**
- Can you think of some numbers that are not whole numbers **OR** integers?
- The set of ALL numbers you know about is called **real numbers**.

#### <u>Whole numbers:</u> 0, 1, 2, 3... <u>Integers:</u> Whole numbers plus all the negatives <u>Real Numbers:</u> Integers plus all the fractions & decimals in between

- Try to come up with one real-world example of something that you would count with:
  - Whole numbers
  - IntegersReal Numbers

- The two **most important** groups of numbers for this unit...
- Real numbers can be broken into two categories;
- RATIONAL and IRRATIONAL.

Rational Numbers: Anything that can be written as a fraction of integers Irrational Numbers:

Anything that CANNOT be written as a fraction of integers

## For example...

- $\frac{1}{2}$  is a rational number. It is 1 divided by 2.
- -7 is a rational number. It is -7 divided by 1.
- $2\frac{1}{4}$  is a rational number. It is equivalent to  $\frac{9}{4}$ .
- Is 43.21 a rational number?
- Is 2.777 ... a rational number?
- Is 0.7423897... a rational number?

# What KIND of decimals can rational numbers be???

- A rational number is anything that can be written as a fraction of integers
- In your group, pick two integers. Divide them, and see what you get. You may use a calculator if you wish (push ctrl → enter to get the decimal).
- Repeat the process. For each, write the **FRACTION** along with the **DECIMAL** that it equals.
- Write all of your results on a giant whiteboard.

## Fractions and Decimals

• Terminating Decimals:

When a long division problem results in a remainder of 0. (The decimal "ends")

• <u>Repeating Decimals:</u> Where one or more digits repeat without end.







