Warm Up

Solve Each of The Following In Your Notebooks

No talking try it on your own

Hint: **BEDMAS**

1) $5 - 6 \div (4-2) - 7(5+2)$

2) $12 - 2(4+1)^2 + 8 \times 5 + 36 \div 18$

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Hint: ~~BEDMAS~~ **BEDMAS**

1) $5 - 6 \div (4-2) - 7(5+2)$

$5 - 6 \div (2) - 7(7)$

$5 - 3 - 49$

$2 - 49$

-47

Warm Up

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Hint: ~~BE~~DMAS

2) $12 - 2(4+1)^2 + 8 \times 5 + 36 \div 18$

$12 - 2(5)^2 + 8 \times 5 + 36 \div 18$

$12 - 2(25) + 8 \times 5 + 36 \div 18$

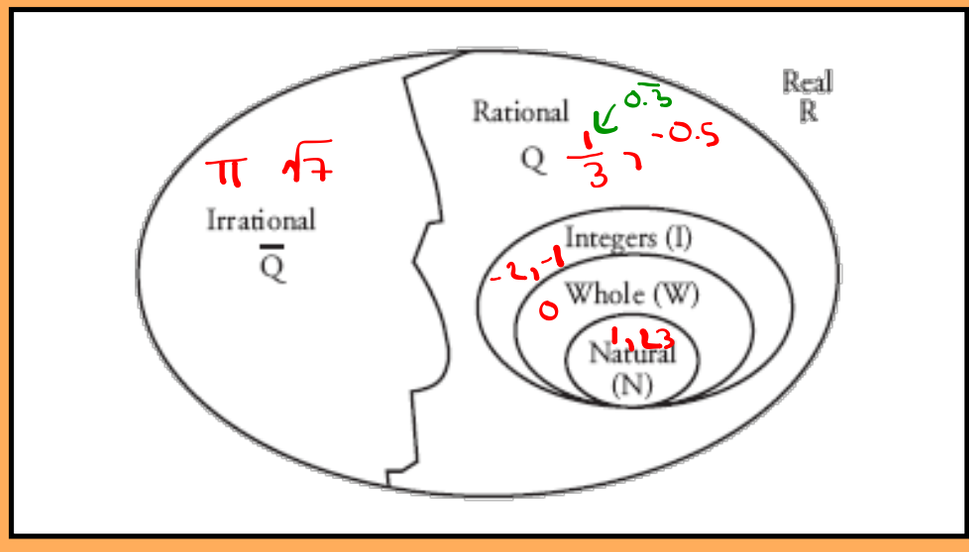
$12 - 50 + 40 + 2$

$-38 + 40 + 2$

$2 + 2$

4

Review of Types of Number Systems



THE NUMBER SYSTEM

Natural Numbers : All positive non-zero numbers
Counting numbers Ex. 1, 2, 3 etc

Whole Numbers: Counting numbers including zero.
Ex. 0, 1, 2, 3, etc

Integers: Are all positive and negative whole numbers.
(Remember zero is neither negative or positive)
Ex: ....3,2,1,0,-1-2,-3...

Rational Numbers: All whole numbers, fractions, mixed numbers, decimals and their negatives
The decimal must repeat or terminate also.
Ex: 1/3, 4, 3/4

Irrational Numbers: Decimals that never terminate or repeat.
Ex: $\sqrt{2}$

Real Numbers: All rational and irrational numbers are real numbers
Ex: All possible numbers

Exercise

Complete the table

	N	W	I	Q	$\overline{Q}$	R
5	✓	✓	✓	✓	✗	✓
-2	✗	✗	✓	✓	✗	✓
$\frac{3}{4}=0.75$	✗	✗	✗	✓	✗	✓
-1.3	✗	✗	✗	✓	✗	✓
$\sqrt{5}=2.236\ldots$	✗	✗	✗	✗	✓	✓
$0.\overline{3}=0.333\ldots$	✗	✗	✗	✓	✗	✓
$\sqrt{9}=3$	✓	✓	✓	✓	✗	✓
0	✗	✓	✓	✓	✗	✓

TRUE or FALSE:

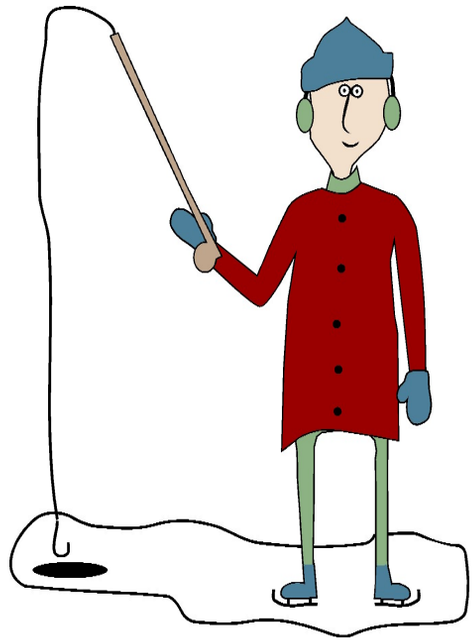
1. ALL integers are rational numbers.

2. ALL natural numbers are whole numbers.

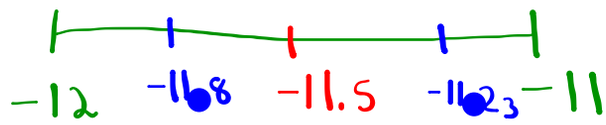
3. ALL rational numbers are natural numbers.

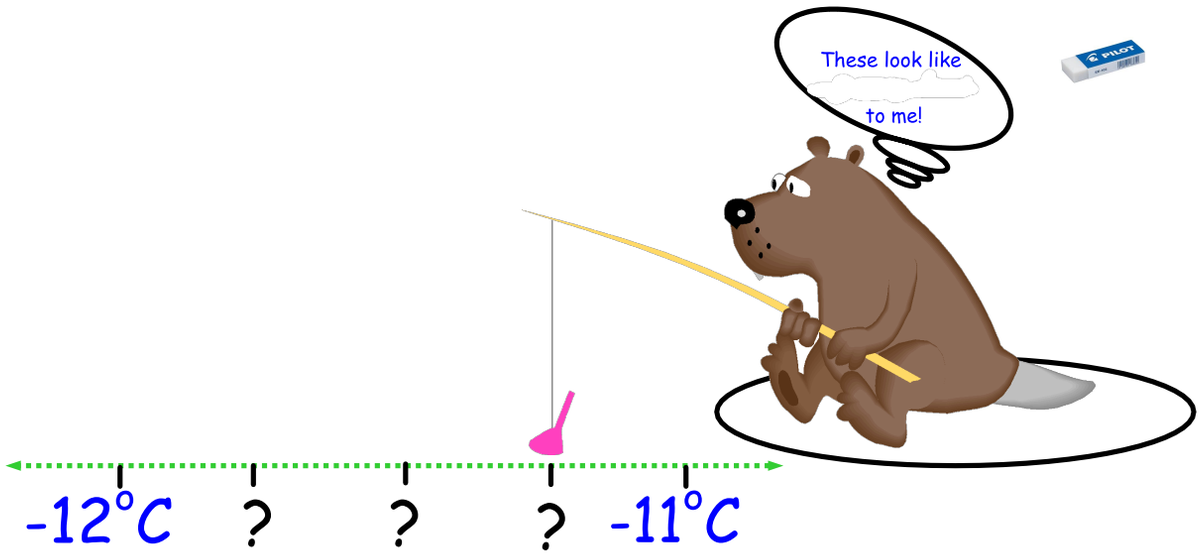
4. ALL integers are irrational numbers.

Suppose you are ice fishing on Richford Lake, NWT. The temperature at midnight is -12°C. At 6 am the next day, the temperature is -11°C. What must the temperature have been at some time during the night?



12 am 6 am




These look like
to me!
PILOT
-12°C
?
?
?
-11°C

A rational number is any number that can be written in the form $\frac{a}{b}$ where a and b belong to integers and b≠0.

$$Q = \left\{ \frac{a}{b} \mid a,b \in I \ , b \neq 0 \right\}$$

$$Q = \left\{ \frac{a}{b} \mid a,b \in I \ , b \neq 0 \right\}$$

$6\frac{3}{4}$

-16

12.7

700

$\frac{-8}{9}$

$\frac{4}{5}$

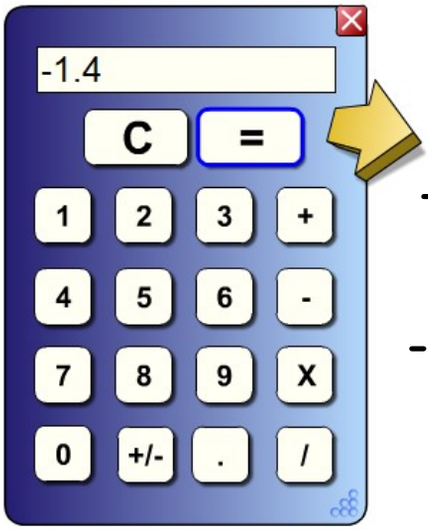
$\sqrt{9}$

0.1258

0.3

0.25

Use a calculator to determine the value of each rational number.

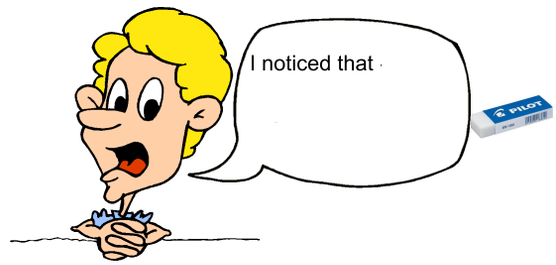


$-\frac{7}{5} = -1.4$

$\frac{7}{-5} = -1.4$

$-\frac{7}{5} = -1.4$

What did you notice??



(–)

$\frac{-7}{5} = \frac{7}{-5} = -\frac{7}{5}$

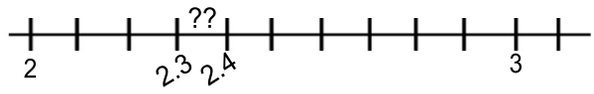
$-1.4 = -1.4 = -1.4$

$(-) \times (-) =$

$$\left(\frac{-1}{2}\right) \times \left(\frac{2}{-3}\right) = \frac{-2}{-6} = \frac{1}{3}$$

$$\frac{-1}{2} \times \frac{-2}{3} = \frac{2}{6}$$

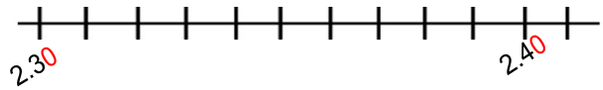
$$\frac{-2}{3} = \frac{2}{-3} = -\frac{2}{3}$$

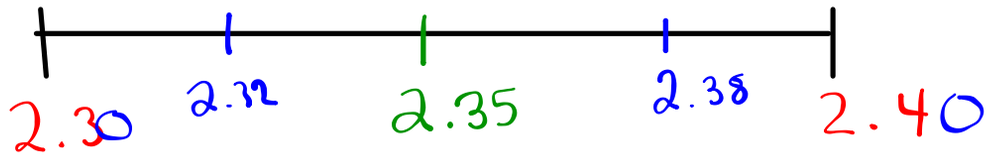


Hint... Add a zero place holder at the end of the decimal.

2.30

2.40





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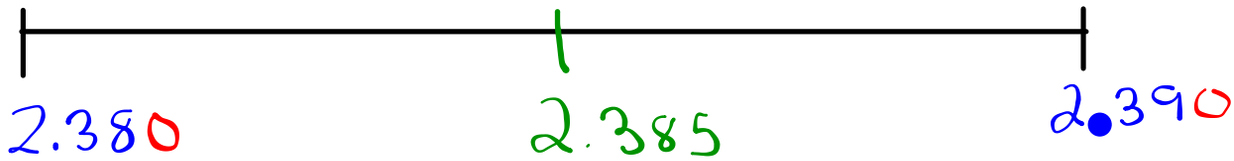
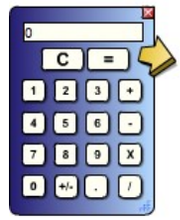


1. Change the fractions to decimals.



$\frac{2}{5}$ $\frac{3}{4}$

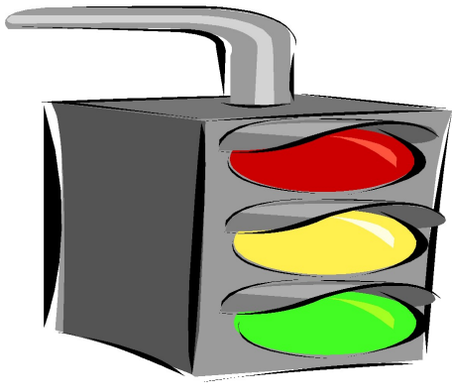
$2 \div 5$ $3 \div 4$

0.4 0.75

2. Write the fractions with common a denominator.

$\frac{2}{5}$ $\frac{3}{4}$

$\frac{8}{20}$ $\frac{15}{20}$



Homework

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Questions:

5, 6, 7,

$\frac{1}{2} = 0.5$

2.40 2.30

2.41

Study your notes on the number system for tomorrow's quiz!