

Warm Up

Solve Each of The Following In Your Notebooks

No talking try it on your own

Hint: **BEDMAS**



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

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

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$$\begin{aligned}
 1) & 5 - 6 \cdot (4-2) - 7(5+2) \\
 & = 5 - 6 \cdot (2) - 7(7) \\
 & = 5 - 3 - 49 \\
 & = 2 - 49 \\
 & = -47
 \end{aligned}$$

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Hint: ~~B~~~~E~~~~D~~~~M~~~~A~~~~S~~



2)

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

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

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

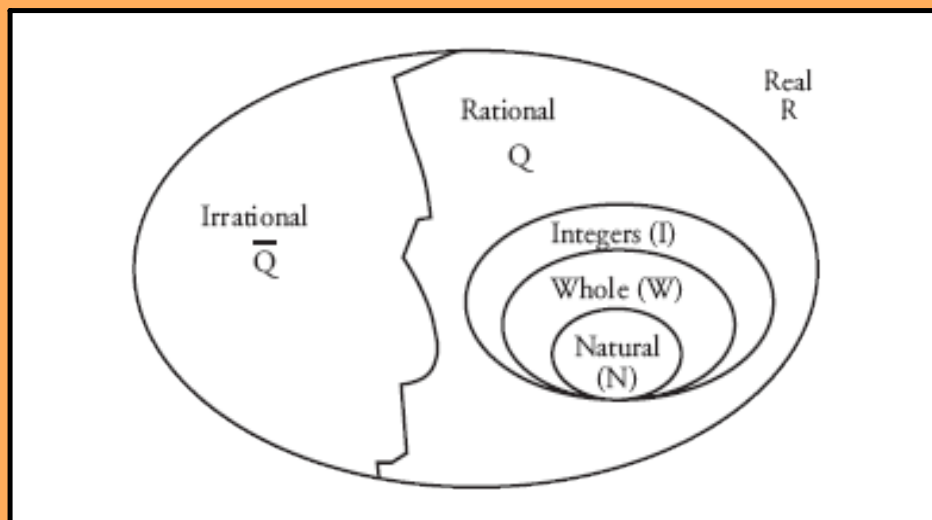
$$12 - 50 + 40 + 2$$

$$= -38 + 40 + 2$$

$$= 2 + 2$$

$$= 4$$

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

$$\sqrt{7} = 2.645751316...$$



	N	W	I	Q	\bar{Q}	R
5	✓	✓	✓	✓	✗	✓
-2	✗	✗	✓	✓	✗	✓
$\frac{3}{4}$	✗	✗	✗	✓	✗	✓
-1.3	✗	✗	✗	✓	✗	✓
$\sqrt{7}$	✗	✗	✗	✗	✓	✓
$\sqrt{9}$	✓	✓	✓	✓	✗	✓

→ 3

TRUE or FALSE:

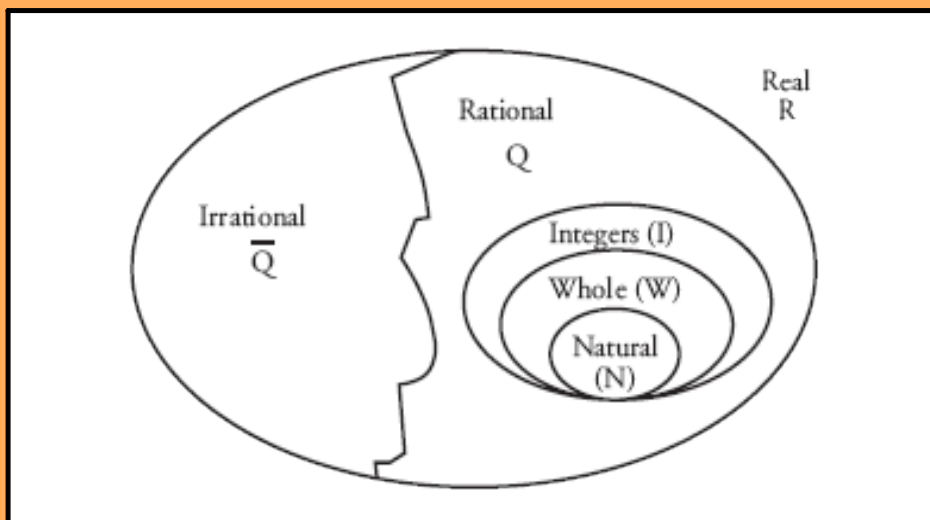
1. ALL integers are rational numbers. T

2. ALL natural numbers are whole numbers. T

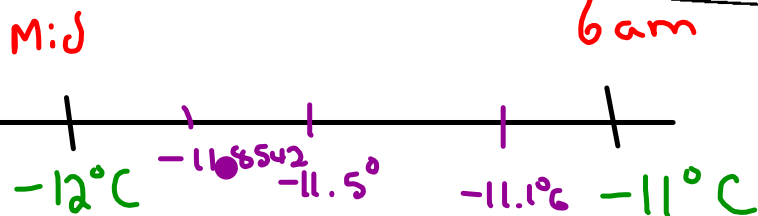
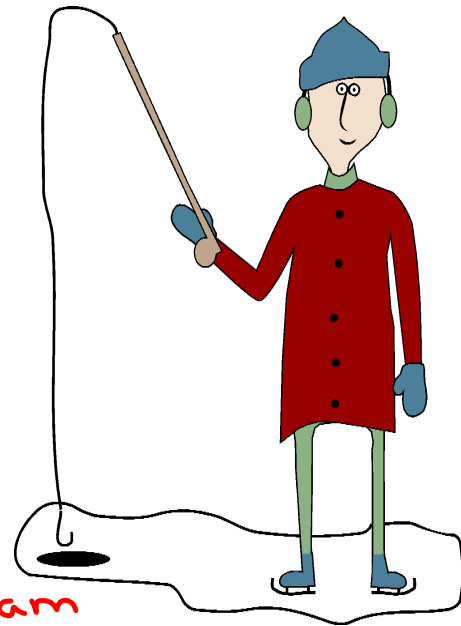
3. ALL rational numbers are natural numbers. F

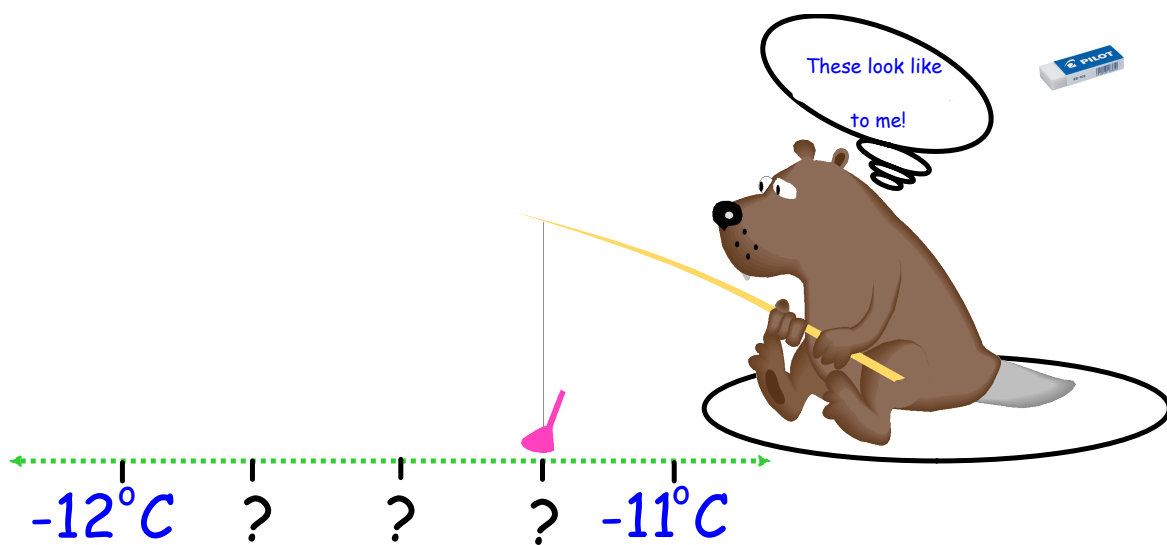
4. ALL integers are irrational numbers. F

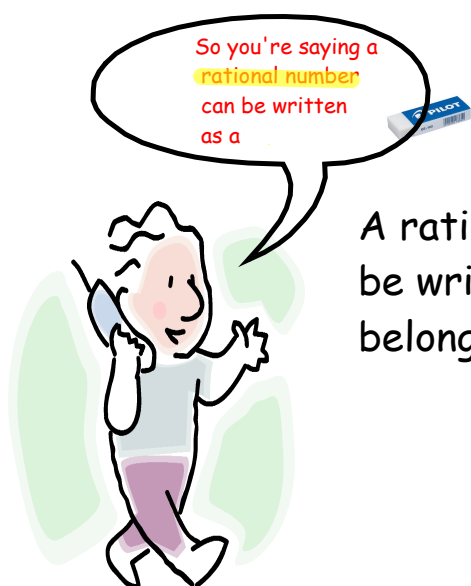
Review of Types of Number Systems



Suppose you are ice fishing on Blanchford 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?







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

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

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

$$\frac{-2}{3} \qquad \frac{5}{1}$$

↗

12.7

$6\frac{3}{4}$

-16.

700.

$\frac{4}{5}$

0.1258

0.3

0.25

$\frac{9}{8}$

$\sqrt{9} = 3$

Yes!

Are these numbers rational?

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

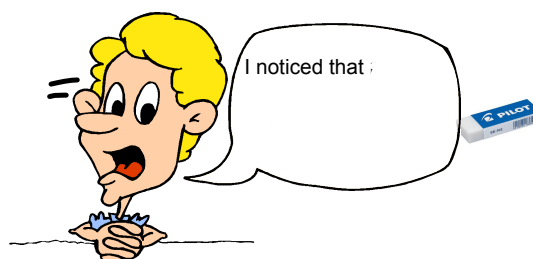
What did you notice??

$$-\frac{7}{5} = (-7) \div (5) = -1.4$$

$$-\frac{7}{5} = (7 \div 5) - = -1.4$$

$$-\frac{7}{5} = 7 \div (-5) = -1.4$$

(-)



$$\left(\frac{2}{5}\right) \times \left(\frac{-1}{3}\right) \times \left(\frac{-3}{4}\right)$$

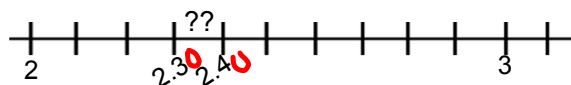
$$\left(-\frac{2}{5}\right) = -0.4$$

$$\left(\frac{2}{-5}\right) = -0.4$$

$$-\left(\frac{2}{5}\right) = -0.4$$

$$\left(-\frac{1}{2}\right) \left(\frac{2}{3}\right) \left(\frac{4}{5}\right) =$$

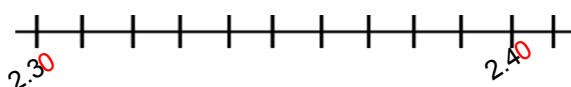
$$\left(-\frac{1}{2}\right) \left(\frac{2}{3}\right) \left(-\frac{4}{5}\right) = \frac{8}{30}$$



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

2.30

2.40



What are 3 numbers

between 3.25 and 3.26

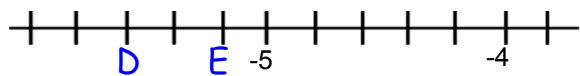
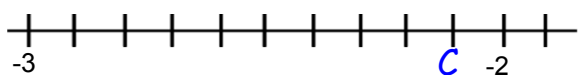
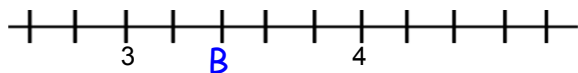
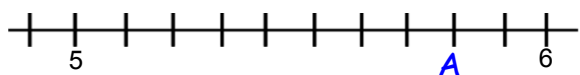
3.250 3.260

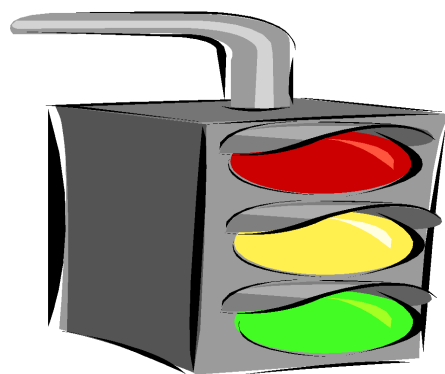
∨

3.251

⋮

3.259





Homework

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Questions:

5, 6, 7,

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