Curriculum Outcome

N1: Demonstrate an understanding of rational numbers by: comparing and ordering rational numbers; solving problems that involve arithmetic operations on rational numbers.

Student Friendly:
Learn how to identify and write rational numbers.

No talking - try it on your own. :)

Warm Up

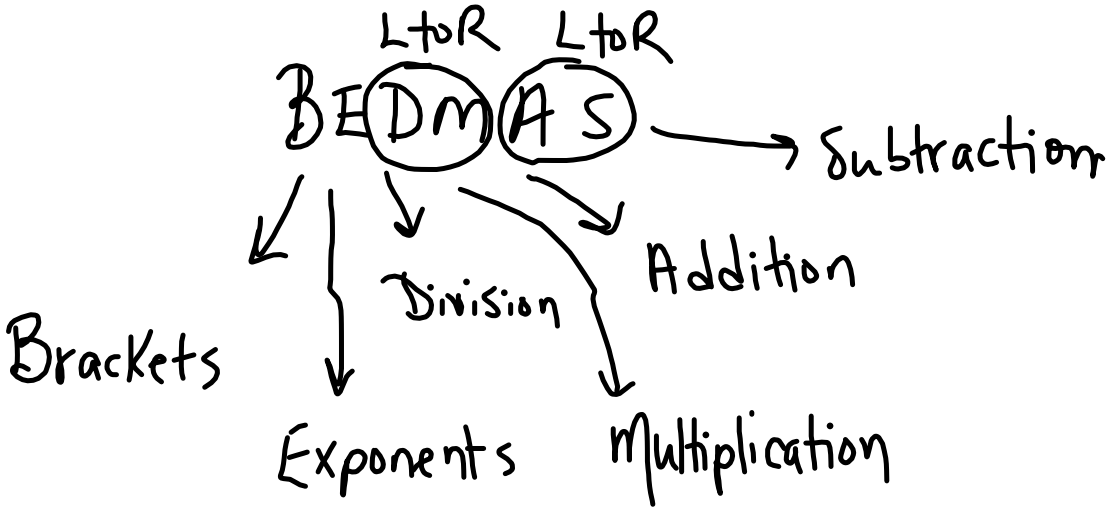
Solve in your notebooks:

1) $3 + 7(10 - 6) - 2$

$=$ 29

2) $10 \times 5 + 3(12 - 3)$

$=$ 77


LtoR
LtoR
BEDMAS
Subtraction
Addition
Division
Brackets
Exponents
Multiplication

Warm Up

Solve in your notebooks:

1) $3 + 7(10 - 6) - 2$

$= 3 + 7(4) - 2$

$= 3 + 28 - 2$

$= 31 - 2$

$= 29$

Multiplication:

2×4 $\quad 2(4) \quad 2 \cdot 4$

$(2)(4)$

Warm Up

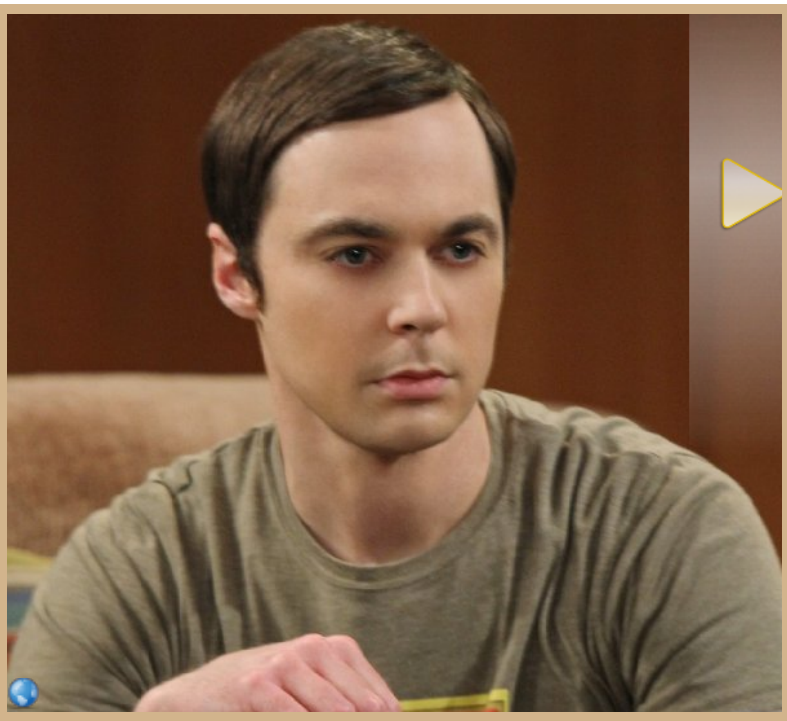
Solve in your notebooks:

2) $10 \times 5 + 3(12 - 3)$

$= 10 \times 5 + 3(9)$

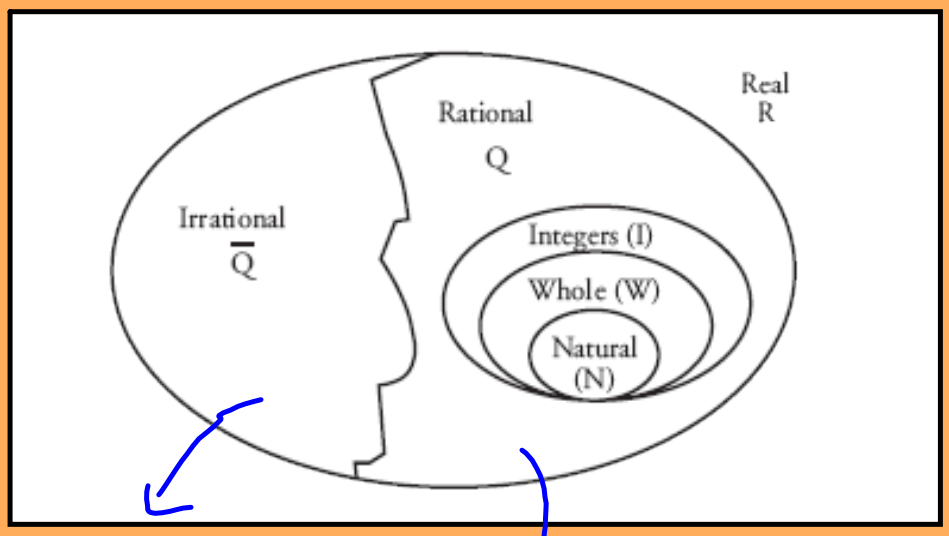
$= 50 + 27$

$= 77$



"The Chuck Norris of Numbers"

Review of Types of Number Systems



All non-terminating, non-repeating decimal numbers like π (3.1415...) and $\sqrt{2}$ (1.41421356...).

Rational numbers are numbers that can be written as a fraction. This includes terminating and repeating decimal numbers and the square roots of perfect squares.

THE NUMBER SYSTEM

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

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

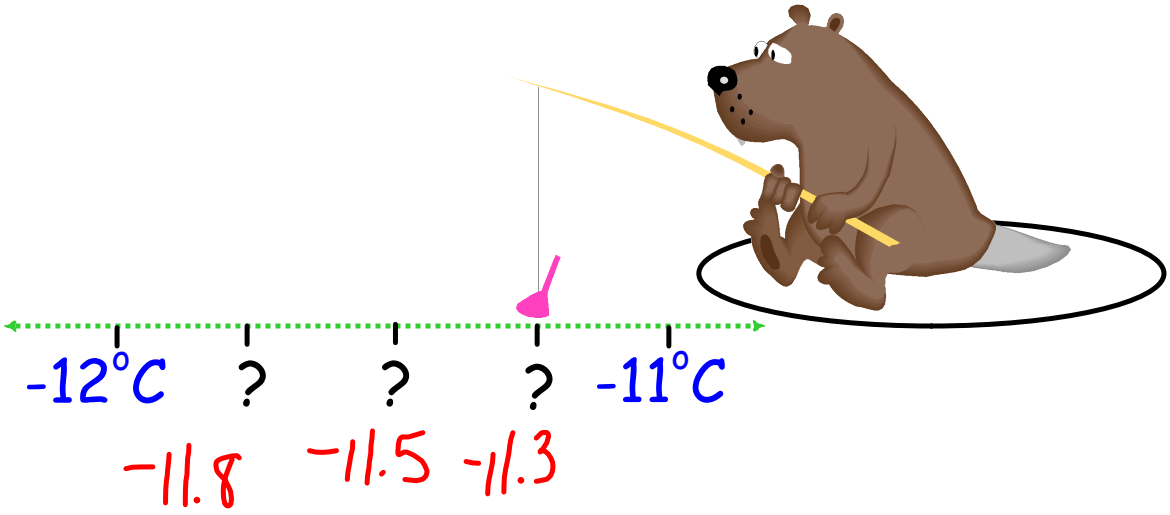
Integers: Are all positive and negative whole numbers. (Remember - Zero is neither negative nor positive.)
I Ex: ...-3, -2, -1, 0, 1, 2, 3...

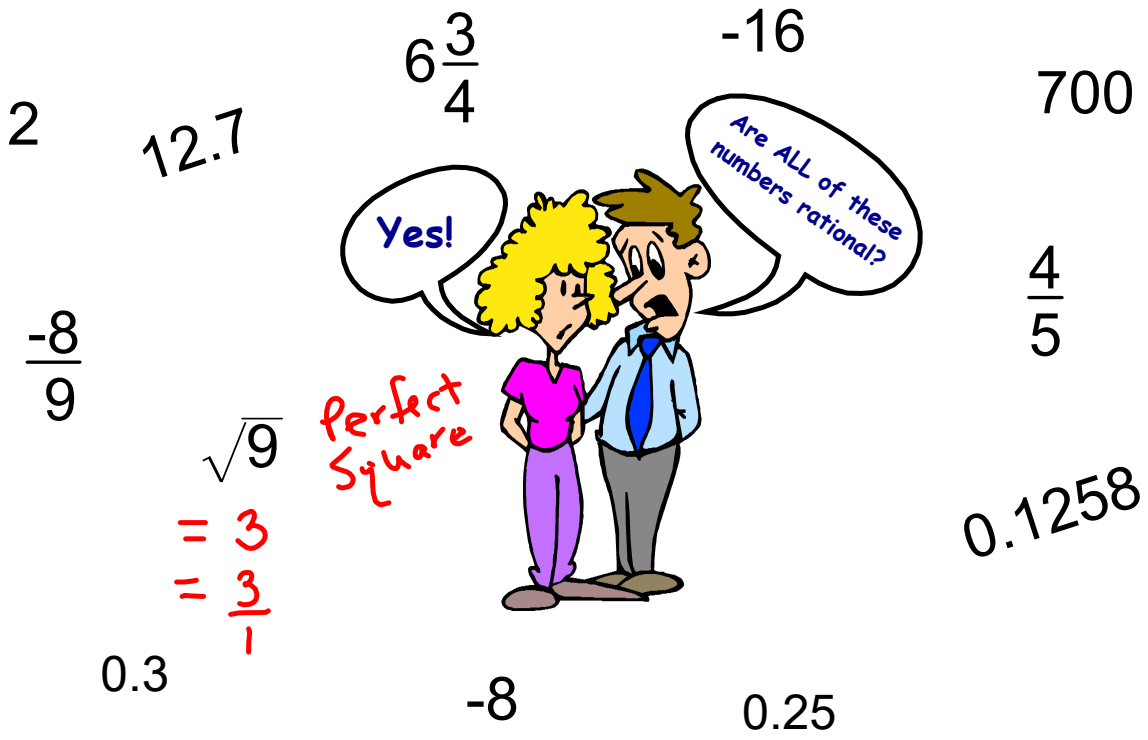
Rational Numbers: All whole numbers, fractions, mixed numbers, decimals numbers and their negatives. The decimal numbers must repeat or terminate.
Q
$\frac{4}{9}$ $3\frac{75}{100}$ $\frac{4}{1}$
Ex: 1/3, 4, 3/4 , 3.75 , $0.\overline{4}$, $\sqrt{9}$, -2

Irrational Numbers: Decimals numbers that never terminate or repeat.
$\overline{Q}$ Ex: $\sqrt{2} \doteq 1.41421356\ldots$; $\pi (3.1415\ldots)$
$\sqrt{2} \doteq 1.4$

Real Numbers: All rational and irrational numbers are REAL numbers.
R

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?




$6\frac{3}{4}$
-16
2
12.7
700
Yes!
Are ALL of these numbers rational?
$\frac{-8}{9}$
$\frac{4}{5}$
$\sqrt{9}$
Perfect Square
$= 3$
$= \frac{3}{1}$
0.1258
0.3
-8
0.25

How to change a fraction to a decimal:

Take the top (the numerator) and divide by the bottom (the denominator).

$$\frac{3}{8}$$

$$3 \div 8 = 0.375$$

terminating decimal number (it ends)

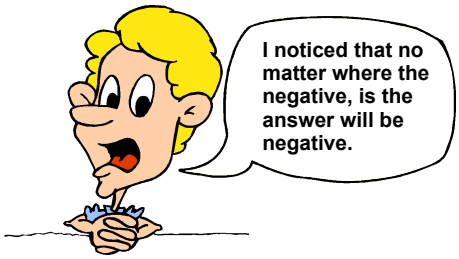
Use a calculator to determine the value of each rational number.

$-\frac{7}{5}$ = -7 ÷ 5 = -1.4

$-\frac{7}{5}$ = - (7 ÷ 5) = -1.4

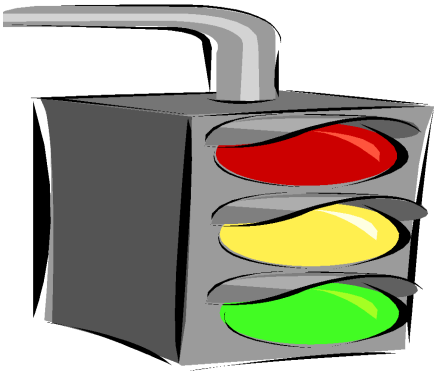
$-\frac{7}{5}$ = 7 ÷ -5 = -1.4

What did you notice??

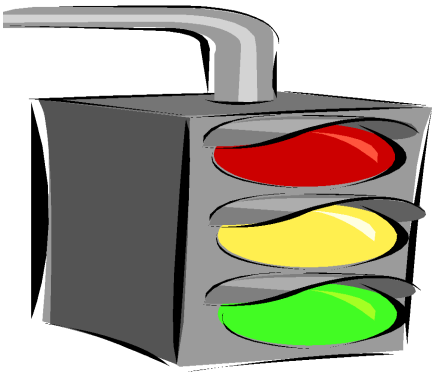


Write 2 more equivalent fractions to the following without changing the 4 and the 9:

$$\frac{-4}{9} \qquad \frac{4}{-9} \qquad -\frac{4}{9}$$



It is now time for HOME LEARNING!!!



HOME LEARNING:

Pages 101 and 102 - Questions:
5 , 6 , 7 , 12aceh , 13

NOTE:

If there are ONLY fractions in a question, then you must have fractional answers. If the question has fractions AND decimal numbers, then your answer can be in either decimal or fraction form.