September 10, 2014

Due Today: HW 1.1 + Video 1.1
Due Next Class: HW 1.2 + Video 1.2

Unit 1: Beat the Basics
Lesson 1.2: Different Number Types

Get Ready: Please check your answers from HW 1.1

1. 20	2. -7	3. -21
4. 24	5. -2	6. 7
7. 1	8. -5	9. -3
10. 3	11. 2	12. 12

13. Pos 14. Neg 15. Lilly & Daniela

If you got any incorrect or weren't sure about how to do a problem, then please ask the person you sit with if he/she knows how to do it.

Homework Review

(8) $(14-(1-2))\div -3$ PEMDAS

$(14+1)\div -3$

$15\div -3$

$\boxed{-5}$

Sep 10-11:10 AM

Will the answer be positive or negative?

Multiplying & Dividing Numbers

By looking at the problem, can you tell if the answer will be positive or negative WITHOUT solving anything

- if the signs are both ± then answer is Positive
- if the signs are diff. then answer is Negative.

Two Positive Numbers:

2×4 $\qquad$ $\frac{28}{4}$

Two Negative Numbers:

$-2 \cdot -4$ $\qquad$ $-24 \div -3$

One Positive & One Negative Number:

$(-5)(6)$ $\qquad$ $-42 \div 7$

More than Two Numbers:

$-7 \cdot 4 \cdot -4$ (+) $\qquad$ $10 \cdot -9 \cdot 2$ (−) $\qquad$ $-7 \cdot -8 \cdot 9 \cdot 6$ (+)

$-3 \cdot 2 \cdot -1 \cdot 4 \cdot -7$ (−) $\qquad$ $2 \cdot -3 \cdot 4 \cdot -6 \cdot 1 \cdot 3$ (+)

* if there is an even # of negative # then the answer is positive

Sep 10-6:34 AM

Will the answer be positive or negative?

Adding & Subtracting Numbers

By looking at the problem, can you tell if the answer will be positive or negative WITHOUT solving anything

Same Signed Numbers:

$-4 + -4$ (−)

$-5 - -5$

$-6 - -3$ (−)

Different Signed Numbers:

$4 + -1$ (+)

$-7 + 2$ (−)

$5 - -5$ (+)

More than Two Numbers:

$-6 + 4 + -6$

$8 + -1 - -5$

$-8 + -4 - 8$

Sep 10-6:34 AM

What will the answer approximately equal???

1) 15.71 + 19.8931

34 35 36

What are the numbers close to?

Does your answer make sense TO YOU???

2) -7.11 x 3.1021

3) 10.00 - 3.75 - 1.00 - 4.95

4) 2.94 x -5.02 x -1.7582

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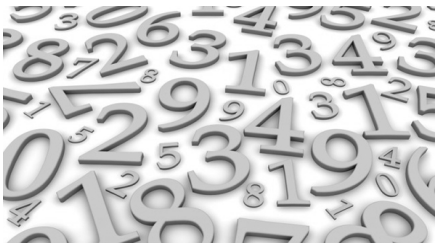
Types of Numbers



Rational #'s

Integers
0, -1, 1, 3, 9, 426, -17

Fractions or Decimals
(terminating
1/2, 1/3, 426/17
0.1, 3.7, -45

or repeating)

$3.6\overline{66}\ldots$
$-4.56\overline{50}$

Irrational #'s

Any thing else:

Square roots
$\sqrt{2}, \sqrt{7}, \sqrt{20}$

Decimals (non terminating / repeating)
2.341029... -3.712...

Specials-

e, π, τ

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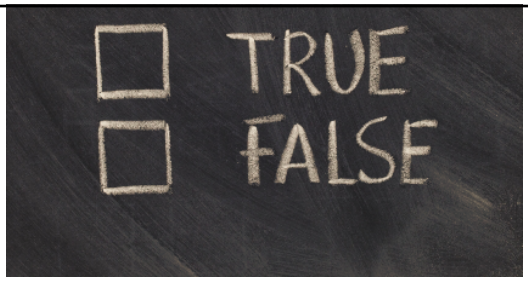
Rational

any # that can be expressed as a Ratio of two integers

Irrational

any # that can't be expressed as a Ratio of two integers

Sep 10-1:50 PM



T An integer is a rational number.

F A rational number is an integer.

A number is either rational or irrational, but not both.

T

F Rational can't be decimals.

F All negative numbers are Rational.

F All square roots are irrational.

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What type of # Worksheet

1. -2.5 R
2. ½ R
3. √3 I
4. 12 R
5. $1.\overline{9999}...$ R
6. π I
7. 0 R
8. 1.892013... I
9. 1.25 R
10. √9 R
11. 9/5 R
12. -3.0128... I
13. 1,000 R
14. √10 I
15. e I

Sep 10-2:04 PM

THINK:

Rational + Rational = Rational

Irrational + Irrational = Irrational

Rational + Irrational = Irrational

Let a = 2, b = √2, c = - ¼ , d = π.

Identify each of the following as Rational or Irrational:

1. a + b : _____
2. a + c : _____
3. a + d: _____
4. b + c : _____
5. b + d: _____
6. c + d: _____

Sep 10-2:08 PM

Recap

Today in MATH

Rational + Irrationals

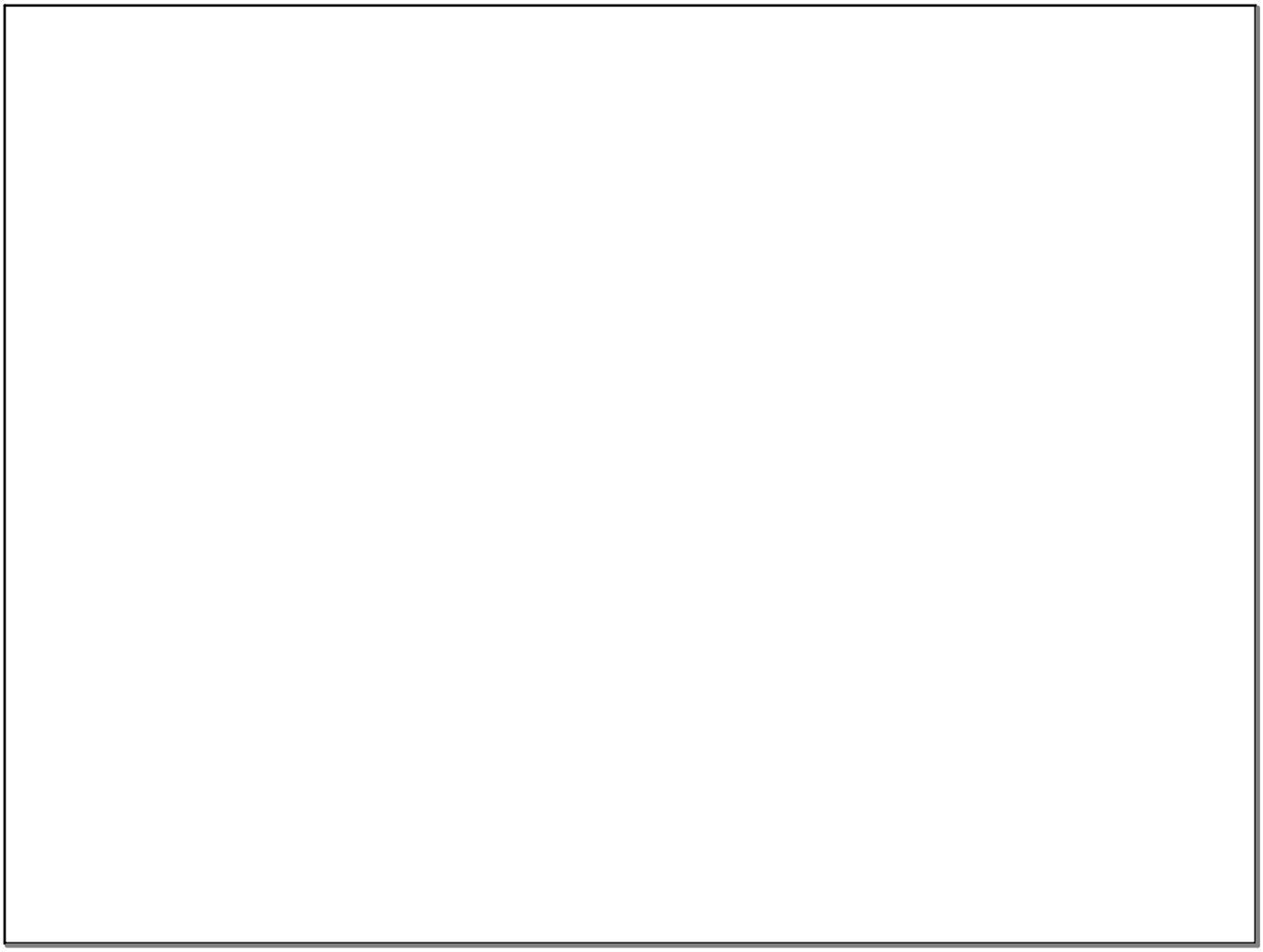
Homework:

Video 1.2 (fractions) + Video Notes + HW 1.2

Next Class:

Fraction Problem Solving

~~Supplies~~



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