



Warm UP!!

Write each mixed number as an improper fraction:

$$1) \quad 3\frac{3}{5} \\ = \frac{18}{5}$$

$$2) \quad -5\frac{5}{6} \\ = \frac{-35}{6}$$



3) Put the fractions in order from least to greatest

$$-\frac{1}{2}, -\frac{4}{5}, -\frac{11}{15}, \frac{2}{32}, \frac{1}{20}$$



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$$\downarrow$$

-0.5

$$\downarrow$$

-0.8

$$\downarrow$$

-0.7333333333333333

$$\downarrow$$

0.0625

$$\downarrow$$

0.0500

$$-0.8$$

$$-0.7333333333333333$$

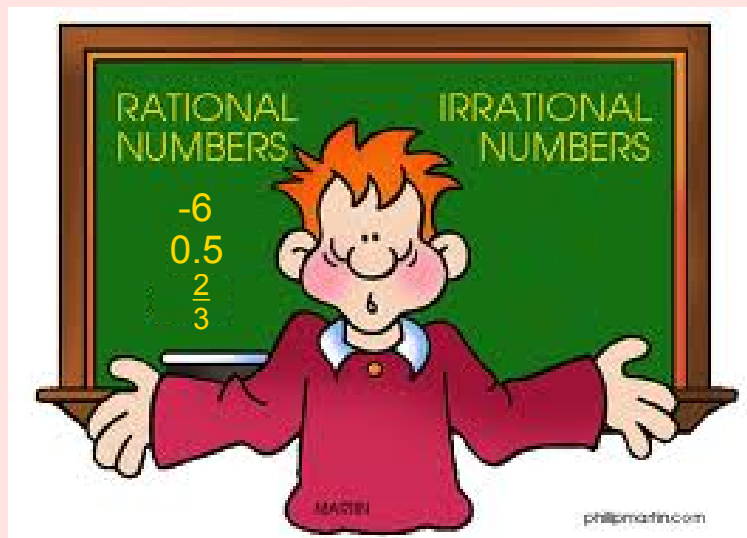
$$-0.5$$

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$$-\frac{4}{5}, -\frac{11}{15}, -\frac{1}{2}, \frac{1}{20}, \frac{2}{32}$$

3.2 Adding Rational Numbers



Addition of Integers



Eight is bigger than 2, when ;
don't look at the negative sign

If the signs are the **same**:

Keep the same sign, and ADD.

If the signs are **different**:

Lets Practice

$$(-8)+(-5)=-13$$

$$(-13)+(-2)= -15$$

$$(9)+(-3)= 6$$

$$(6)+(11)= 17$$

$$(10)+(6)= 16$$

$$(-11)+(-3)= -14$$

$$(7)+(-5)= 2$$

$$(-6)+(8)= 2$$

We use the same rules with decimals:



$$1) (-2.1) + (-1.7) = \underline{-3.8}$$

$$2) (-6.8) + (1.5) = \underline{-5.3}$$

$$3) (-7.1) + (12.3) = \underline{+5.2}$$

If you use a calculator,
make sure you know how
to input negative numbers!

Adding Fractions

When adding fractions you need a COMMON DENOMINATOR:

$$1) \frac{-5}{8} + \frac{6}{8}$$

$$= \frac{+1}{8}$$

$$2) -\frac{8}{7} + \frac{-4}{7}$$

$$= \frac{-8}{7} + \frac{-4}{7}$$
$$= \frac{-12}{7}$$

Which expressions

$$\frac{-5}{8} + \frac{6}{8}$$

have the same sum?

$$\frac{6}{8} + \frac{-5}{8} \quad \updownarrow \quad \frac{-5}{8} + \frac{-6}{8} \quad \updownarrow \quad \frac{5}{8} + \frac{-6}{8}$$

$$1. \quad \frac{-3}{8} + \frac{5}{8}$$

$$= \frac{\overset{2}{\cancel{2}} \frac{-3}{\cancel{8}^2}}{\underset{2}{\cancel{4}}^2} + \frac{5}{8}$$

$$2. \quad \frac{5}{-7} + \frac{-3}{7}$$

$$= \frac{-5}{7} + \frac{-3}{7}$$

$$= \frac{-8}{7}$$

$$3. \quad \frac{5}{4} + \frac{3}{2} \times 2$$

$$= \frac{5}{4} + \frac{6}{4}$$

$$= \frac{11}{4}$$

$$4. \quad \frac{11}{-3} + \frac{3}{5}$$

$$= \frac{-11 \times 5}{3 \times 5} + \frac{3 \times 3}{5 \times 3}$$

$$= \frac{-55}{15} + \frac{9}{15}$$

$$= \frac{-46}{15}$$

Class/Homework

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5

6

7

8

11a,b,d,c,e,f