

10-5-17

Aim: SWBAT add and subtract Rational numbers (fractions and mixed numerals) that include negatives.

HW: Pg. 240 # 2 - 13

Quiz tomorrow (Conversions and fraction basics)

Do Now: Evaluate.

$$\frac{1}{5} + \frac{1}{5} = \frac{2}{5} \quad \frac{2}{8} - \frac{1}{8} = \frac{1}{8}$$

**Evaluating Fractions and Mixed Numbers with Negatives**

1. Circle double signs and rewrite.
2. Make all terms fractions.
3. Find the least common denominator (LCD) and make equivalent fractions.
4. Keep the LCD and compute the answer's numerator using integer rules.
5. Simplify if necessary. (Final answers should always be in simplest form.)

$$\frac{2}{3} + \frac{4}{9}$$

The LCD is the largest denominator or a multiple of it !!!!!

$$3 \sqrt{9} \checkmark$$

9, 18, 27

3, 6, 9, 12, 15, 18, 21, 24, 27

Same signs: Add and Keep

Different signs: Subtract and Think

Evaluate. Find the value.

$$-\frac{2}{5} + \left(-\frac{5}{6}\right)$$

$$\frac{-2 \times 6}{5 \times 6} - \frac{5 \times 5}{6 \times 5}$$

$$\boxed{\frac{-12}{30} - \frac{25}{30}}$$

$$\boxed{-12 - 25}$$

$$-37$$

$$\frac{-37}{30}$$

$$\boxed{-5 + 28}$$

$$-\frac{1}{7} - \left(-\frac{4}{5}\right)$$

$$\frac{-1 \times 5}{7 \times 5} + \frac{4 \times 7}{5 \times 7}$$

$$\boxed{\frac{-5}{35} + \frac{28}{35}}$$

$$\frac{23}{35}$$

Same signs: Add and Keep

Different signs: Subtract and Think

Evaluate.

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

$$\frac{-4 \times 3}{5 \times 3} + \frac{2 \times 5}{3 \times 5}$$

$$\boxed{\frac{-12}{15} + \frac{10}{15}}$$

$$| -12 + 10 = \frac{-2}{15}$$

Same signs: Add and Keep

Different signs: Subtract and Think

Evaluate.

$$3\frac{5}{8} - (-1\frac{1}{3})$$

$$3\frac{5}{8} + 1\frac{1}{3}$$

$$\frac{29 \times 3}{8 \times 3} + \frac{4 \times 8}{3 \times 8}$$

$$\boxed{\frac{87}{24} + \frac{32}{24}}$$

$$\frac{119}{24}$$

$$-4\frac{2}{3} - (-3\frac{4}{5})$$

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

$$\frac{-14 \times 5}{3 \times 5} + \frac{19 \times 3}{5 \times 3}$$

$$\boxed{\frac{-70}{15} + \frac{57}{15}}$$

$$-70 + 57$$

$$\frac{-13}{15}$$

Same signs: Add and Keep

Different signs: Subtract and Think

Evaluate.

$$-4\frac{3}{4} - 5\frac{5}{8}$$

$$\frac{-19 \times 2}{4 \times 2} - \frac{45}{8}$$

$$\boxed{\frac{-38}{8} - \frac{45}{8}}$$

$$\frac{-83}{8}$$