Today's Plan:

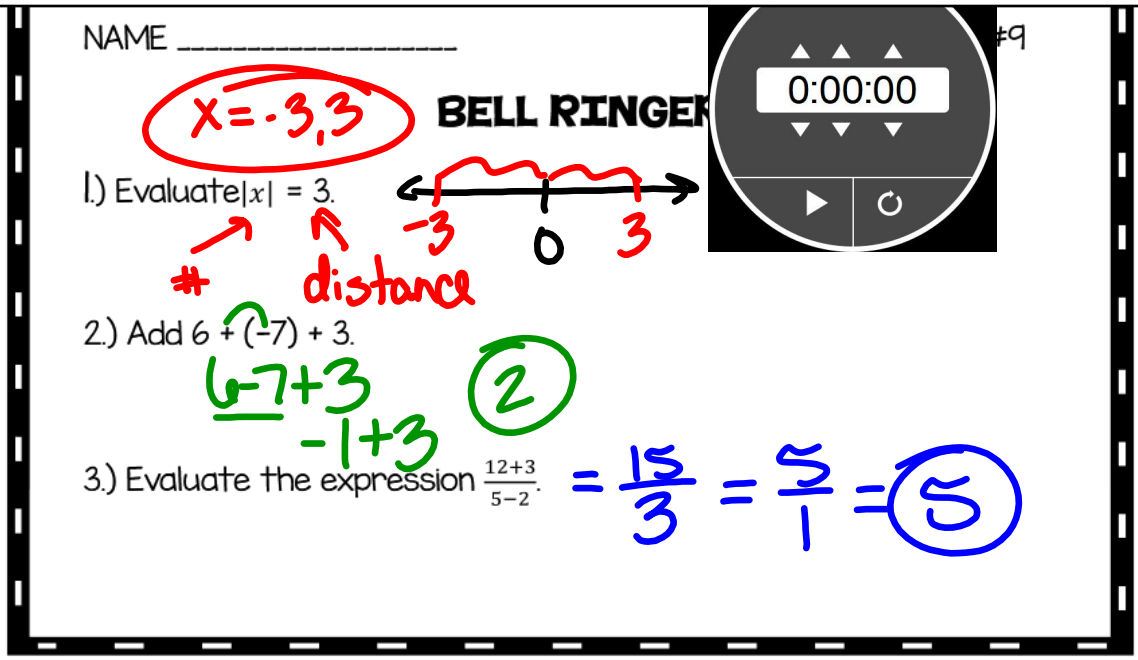
Learning Target (standard): I will perform operations on rational numbers and simplify the results.

Students will: Complete practice problems over previous concepts at the boards, put up homework problems on the board and make necessary corrections to their own work, take notes over new material and complete practice problems over new concepts.

Teacher will: Provide practice problems over previous concepts, check homework problems for accuracy and provide students feedback, describe and provide examples of new concepts and assign students assessment problems over new concepts.

Assessment: Board work, homework check and homework assignment

Differentiation: Students will work at the board, go over and correct homework at their seats, actively engage in lecture over new concepts, practice new concepts with the aid of other students and the teacher and complete homework assignment.



Simplify.

4) $2\frac{1}{3} \cdot -3\frac{3}{4} \cdot -\frac{1}{3}$

$= \frac{7}{3} \cdot \frac{15}{4} \cdot -\frac{1}{3}$

$= -\frac{35}{12}$

Simplify.

6) $-\frac{11}{6} \div -2\frac{1}{2}$

$= -\frac{11}{6} \div -\frac{5}{2}$

$= -\frac{11}{6} \cdot -\frac{2}{5}$

$= \frac{11}{15}$

List the number types in order from smallest to largest and include their symbols.

Natural $\mathbb{N}$

Whole

Integer $\mathbb{Z}$

Rational $\mathbb{Q}$

Irrational

Real $\mathbb{R}$

Simplify.

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

$$\frac{15}{4}\cdot-\frac{5}{2}=-\frac{75}{8}$$

Simplify.

$$-2\frac{2}{3} \div \left(3\frac{1}{2}\right)$$

$$-\frac{8}{3} \div \frac{7}{2}$$

$$-\frac{8}{3} \cdot \frac{2}{7}$$

$$-\frac{16}{21}$$

Simplify.

$$-3\frac{1}{3} \cdot \left(6\frac{1}{4}\right)$$

$$-\frac{\cancel{10}^{5}}{3} \cdot \frac{25}{\cancel{4}_{2}} = -\frac{125}{6}$$

Simplify.

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

$\frac{27}{5} \div -\frac{10}{3}$

$\frac{27}{5} \cdot -\frac{3}{10} = -\frac{81}{50}$

Simplify.

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

$-\frac{14}{3} \cdot -\frac{11}{12} = \frac{77}{6}$

Simplify.

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

$$-\frac{17}{5} \div \frac{7}{3}$$

$$-\frac{17}{5} \cdot \frac{3}{7} = \frac{-51}{35}$$

Operations on Rational Numbers (Fractions):

- turn all mixed numbers into improper fractions first

$$a\frac{b}{c} = \frac{ac+b}{c}$$

Addition and/or subtraction:

- common denominator
- "new" numerator
- keep the denominator
- add/subtract the numerators
- reduce

$$3\frac{1}{3} - 2\frac{3}{4}$$

$\frac{10}{3}\cdot\frac{4}{4} - \frac{11}{4}\cdot\frac{3}{3}$

$\frac{40}{12} - \frac{33}{12}$

$\frac{7}{12}$

Simplify.

$$-\frac{5}{4}+\frac{7}{8}$$

$$-\frac{10}{8}+\frac{7}{8}=\frac{-3}{8}$$

Simplify.

$$\frac{7}{2}-\left(-1\frac{3}{4}\right)$$

$$\frac{7}{2}+1\frac{3}{4}$$

$$\frac{7}{2}+\frac{7}{4}$$

$$\frac{14}{4}+\frac{7}{4}=\frac{21}{4}$$

Simplify.

$$-1\frac{3}{4}+2\frac{1}{8}$$

$$-\frac{7}{4}\cdot\frac{2}{1}+\frac{17}{8}$$

$$-\frac{14}{8}+\frac{17}{8}=\frac{3}{8}$$

Simplify.

$$2\frac{1}{3}-4\frac{2}{5}+1\frac{3}{10}$$

$$=\frac{7\cdot10}{3\cdot10}-\frac{22\cdot6}{5\cdot6}+\frac{13\cdot3}{10\cdot3}$$

$$=\frac{70}{30}-\frac{132}{30}+\frac{39}{30}$$

$$=\frac{-23}{30}$$

Assignment:

Operations on Rational Numbers
Practice #1-12

* You will find this on Google Classroom *