FRACTION REVIEW

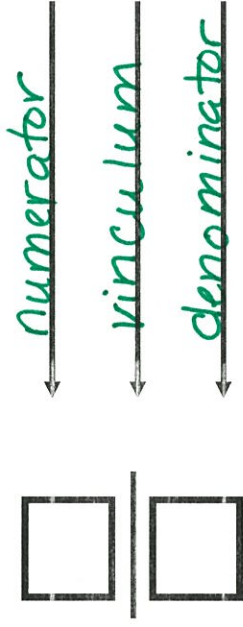$$\frac{\square}{\square}$$

numerator

vinculum

denominator

NO DENOMINATOR? NO PROBLEM!

Any number can be made into a fraction by adding a denominator of __1__ .

NEGATIVE FRACTIONS

3 Ways to Show a Fraction is Negative:

$$-\frac{1}{2} \qquad \frac{1}{-2} \qquad \frac{-1}{2}$$

EQUIVALENT FRACTIONS

If you multiply or divide the numerator and denominator by the same number, you get an equivalent fraction.

$$\frac{2 \cdot 7}{3 \cdot 7} = \frac{14}{21} \qquad \frac{9 \cdot 4}{2 \cdot 4} = \frac{36}{8}$$

$$\frac{100 \div 25}{25 \div 25} = \frac{4}{1} \qquad \frac{8 \div 4}{20 \div 4} = \frac{2}{5}$$

MULTIPLYING

We can multiply fractions with any _denominators_ .

1. Multiply the _numerators_ .

2. Multiply the _denominators_ .

3. Simplify, if possible.

DIVIDING

We can divide fractions by rewriting as a _multiplication_ **problem.**

1. The first fraction _stays the same_ .

2. Division becomes _multiplication_ .

3. _Flip_ (Take the _reciprocal_ of) the second fraction.

4. Follow the rules for _multiplication_ .

REDUCING

A fraction is fully reduced when the only number that divides evenly into both the numerator and the denominator is 1.

$$\frac{120}{112} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{60 \div 2}{56 \div 2} = \frac{30 \div 2}{28 \div 2} = \frac{15}{14}$$

$$\frac{42}{56} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{21 \div 7}{28 \div 7} = \frac{3}{4}$$

ADDING & SUBTRACTING

We can only add and subtract fractions if they are written with the same _denominator_ .

1. Rewrite as _equivalent_ fractions with the same _denominator_ .

2. Add or subtract the _numerators_ .

3. The _denominator_ stays the same.

4. Simplify, if possible.