

Topic 9 Fractions Study Guide

Fractions: (9-1)

names a part of a whole.

$$\frac{3}{4} = \begin{array}{|c|c|c|c|} \hline \blacksquare & \blacksquare & \blacksquare & \blacksquare \\ \hline \end{array} \quad \frac{5}{6} = \triangle \triangle \triangle \triangle \triangle \triangle$$

Fractions and Division (9-2)

Three people share two cans of paint: Each person gets

$$\frac{2}{3} \text{ of a can of paint}$$

Equivalent Fractions (9-3)

name the same part of a whole.

$$\frac{6 \div 2}{8 \div 2} = \frac{3}{4} \quad \frac{6}{8} \text{ is equivalent to } \frac{3}{4}$$

* The numerator and denominator must be multiplied or divided by the same number*

$$\frac{2 \times 2}{3 \times 2} = \frac{4}{6} \quad \frac{2}{3} \text{ is equivalent to } \frac{4}{6}$$

Simplest Form (9-4)

* has the fewest parts
* the numerator and denominator have no common factor.

$$\frac{4}{12} \text{ factors: } \textcircled{4} 1, 2 \quad \frac{4 \div 4}{12 \div 4} = \frac{1}{3}$$

$$\frac{4 \div 2}{12 \div 2} = \frac{2}{6} \text{ or } \frac{2 \div 2}{6 \div 2} = \frac{1}{3} \rightarrow \text{simplest form}$$

Improper Fractions and Mixed Numbers (9-5)

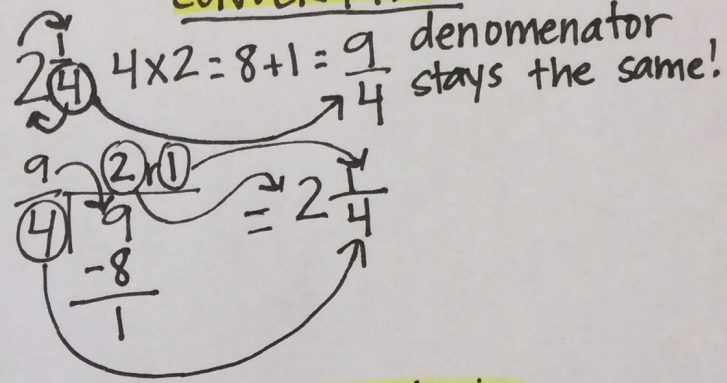
* mixed number: has a whole and part of a fraction.

$$2\frac{1}{4} = \textcircled{\frac{1}{4}} \textcircled{\frac{1}{4}} \textcircled{\frac{1}{4}}$$

* improper fraction: has a numerator greater than or equal to the denominator.

$$\frac{9}{4} = \textcircled{\frac{8}{4}} \textcircled{\frac{1}{4}}$$

CONVERTING



Comparing and ordering Fractions (9-6, 9-7)

To compare fractions easier, you must find the common denominator.

$$\frac{1}{4} \circ \frac{5}{8} \quad \frac{1 \times 2}{4 \times 2} = \frac{2}{8} \quad \frac{5 \times 1}{8 \times 1} = \frac{5}{8}$$

* You find equivalent fractions to compare the original fractions given.*

Least to Greatest:

$$\frac{2}{4}, \frac{2}{6}, \frac{2}{12} \quad \frac{2 \times 3}{4 \times 3} = \frac{6}{12} \quad \frac{2 \times 2}{6 \times 2} = \frac{4}{12} \quad \frac{2 \times 1}{12 \times 1} = \frac{2}{12}$$

$$\frac{2}{12}, \frac{2}{6}, \frac{2}{4} \quad \text{least} \rightarrow \text{greatest}$$