
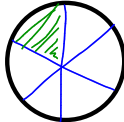

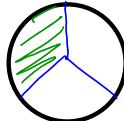


1.4 Representing and Comparing Fractions

A & W Burgers

Ex. 1 Represent each unit fraction using the given model.

a) $\frac{1}{2}$  c) $\frac{1}{6}$ 

b) $\frac{1}{4}$  d) $\frac{1}{3}$ 

NOTE: The smaller denominator means a bigger fraction

When comparing unit fractions, how can you tell without modeling, which one is bigger?

$\frac{1}{?}$ The unit fraction with the biggest denominator is the smallest fraction.

Ex. 2 Order these fractions from least to greatest. *smallest → biggest*

$$\frac{1}{5}, \frac{1}{9}, \frac{1}{2}, \frac{1}{6}, \frac{1}{14}, \frac{1}{3}, \frac{1}{10}$$

$$\frac{1}{14}, \frac{1}{10}, \frac{1}{9}, \frac{1}{6}, \frac{1}{5}, \frac{1}{3}, \frac{1}{2}$$

Ex. 3 Determine the value of each of the following.

a) $\frac{1}{4}$ of 72 "of" means multiply

$$= \frac{1}{4} \cdot \frac{72}{1}$$

$$= \frac{1 \cdot 72}{4 \cdot 1}$$

$$= \frac{72}{4}$$

$$= 18$$

b) $\frac{1}{6}$ of 342

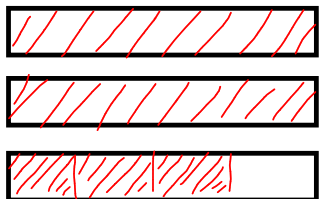
$$= \frac{1}{6} \cdot \frac{342}{1}$$

$$= \frac{342}{6}$$

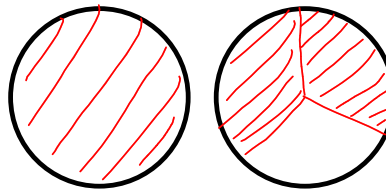
$$= 57$$

Ex. 4 Represent each of the fractions using the given model.

a) $2\frac{3}{4}$ (bar model)

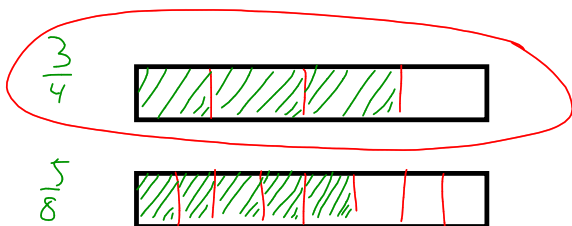


b) $1\frac{2}{3}$ (circle model)

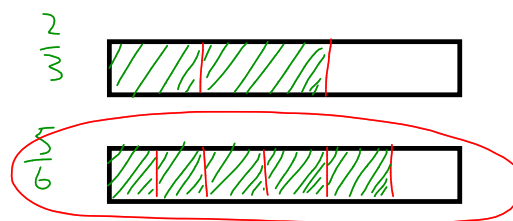


Ex. 5 Determine which fraction is bigger using a visual model.

a) $\frac{3}{4}$ or $\frac{5}{8}$



b) $\frac{2}{3}$ or $\frac{5}{6}$



Ex. 6 Determine which fraction is bigger by comparing denominators

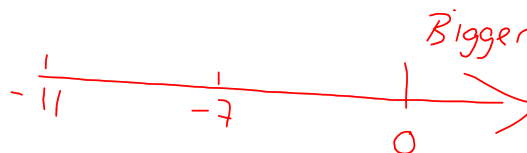
a) $\frac{2}{5}$ or $\frac{2}{7}$
Bigger pieces

b) $\frac{5}{18}$ or $\frac{5}{23}$
Bigger pieces

Ex. 7 Determine which fraction is bigger by comparing numerators

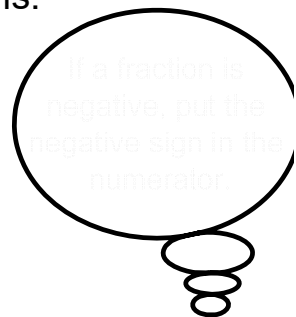
a) $\frac{5}{18}$ or $\frac{3}{18}$

b) *larger*
 $\frac{-7}{12}$ or $\frac{-11}{12}$



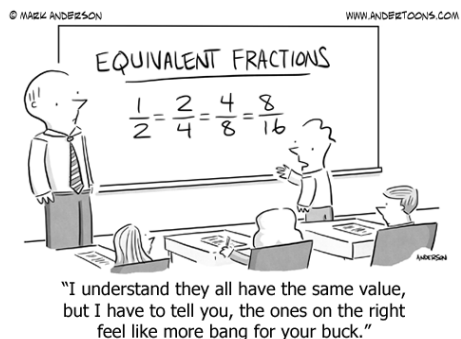
Ex. 8 Determine an equivalent fraction in lowest terms.

a) $\frac{14}{28} \div 14 = \frac{1}{2}$ b) $\frac{35}{15} \div 5 = \frac{7}{3}$ c) $\frac{4}{-10} \div 2 = -\frac{2}{5}$ (C)



Ex. 9 Determine an equivalent fraction.

a) $\frac{2}{3} \times 2 = \frac{4}{6}$, $\frac{6}{9}$, $\frac{8}{12}$, ... b) $\frac{-7}{8} \times 2 = -\frac{14}{16}$, $-\frac{21}{24}$, ...

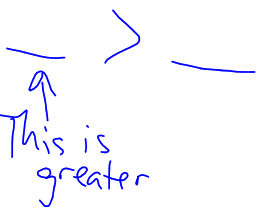
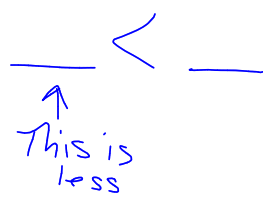


Ex. 10 Use equivalent fractions to determine whether a less than (<) or greater than (>) sign makes the statement true.

(**get a common numerator OR common denominator)

a) $\frac{21}{35} \stackrel{7 \times 3}{7 \times 5} \square \frac{5 \times 5}{7 \times 5} \frac{25}{35}$

b) $\frac{17}{9} \square \frac{11}{5}$



c) $\frac{-35}{20} \stackrel{5 \times -7}{5 \times 4} \triangleright \frac{-12}{5} \stackrel{\times 4}{\times 4} = -\frac{48}{20}$



Ex. 11 Write each improper fraction as a mixed number.

a) $\frac{21}{8}$
 $= 1 \frac{13}{8}$
 $= 2 \frac{5}{8}$

$21 - 8 = 13$
 $13 - 8 = 5$

b) $\frac{-33}{8}$
 $= -4 \frac{1}{8}$

4 of them!
 $4 \times 8 = 32$

c) $\frac{-7}{-5} = \frac{7}{5}$
 $= 1 \frac{2}{5}$

one of them!
 $1 \times 5 = 5$

Ex. 12 Write each mixed number as an improper fraction.

a) $3 \frac{1}{4}$
 $= \frac{12}{4} + \frac{1}{4}$
 $= \frac{13}{4}$

$3 \times 4 = 12$

b) $-5 \frac{3}{5} = -\frac{28}{5}$

$5 \times 5 = 25$
 $25 + 3$



"To show you how well I understand fractions, I only did half of my homework."