

Warm Up Grade 8

Dec. 21, 2016

1) Put the following fraction in order from greatest to least.

$$\begin{array}{cccccc}
 4 \times & \checkmark & \checkmark & \checkmark & \checkmark & \checkmark \\
 \frac{3}{7} & \frac{1}{3} & \frac{5}{18} & \frac{7}{16} & \frac{7}{3} & \\
 \hline
 4 \times & \checkmark & \checkmark & \checkmark & \checkmark & \checkmark \\
 \frac{9}{36} & \frac{4}{36} & \frac{2}{36} & \frac{6}{36} & \frac{12}{36} & \frac{21}{36} \\
 \hline
 \frac{28}{36} & \frac{27}{36} & \frac{18}{36} & \frac{30}{36} & \frac{21}{36} &
 \end{array}$$

$12 \rightarrow 12, 24, 36, 48, \dots$

$\frac{5}{6}, \frac{7}{9}, \frac{3}{4}, \frac{7}{12}, \frac{1}{2}$

2) Find 3 equivalent fractions to $\frac{7}{8}$

$$\frac{7 \times 7}{8 \times 7} = \frac{49}{56}$$

$$\frac{7 \times 2}{8 \times 2} = \frac{14}{16}$$

$$\frac{7 \times 3}{8 \times 3} = \frac{21}{24}$$

3) what is $\frac{18}{20}$ as a decimal?

20

$$\begin{array}{r}
 18 \div 2 = 9 \\
 \hline
 20 \div 2 = 10 \\
 \hline
 0.9
 \end{array}$$

4) Reduce $\frac{36}{90}$

90

$$\begin{array}{r}
 36 \div 9 = 4 \\
 \hline
 90 \div 9 = 10 \\
 \hline
 = \frac{4}{10} = 0.4 \\
 \downarrow \text{Reduce} \\
 \frac{2}{5}
 \end{array}$$

$$\begin{array}{r}
 18 \times 5 = 90 \\
 \hline
 20 \times 5 = 100 \\
 \hline
 0.90
 \end{array}$$

$$\frac{7}{9} = \frac{28}{36}$$

$$\frac{3}{4} = \frac{27}{36}$$

Warm Up Grade 8

Dec. 19, 2016

1) Put the following fraction in order from greatest to least.

$$\frac{7}{9}, \frac{3}{4}, \frac{1}{2}, \frac{5}{6}, \frac{7}{12}$$

$$\frac{28}{36}, \frac{27}{36}, \frac{18}{36}, \frac{30}{36}, \frac{21}{36}$$

$$\frac{5}{6}, \frac{7}{9}, \frac{3}{4}, \frac{7}{12}, \frac{1}{2}$$

2) Find 3 equivalent fractions to $\frac{7}{8}$

$$\frac{7}{8} \times 2 = \frac{14}{16}$$

$$\frac{7}{8} \times 3 = \frac{21}{24}$$

$$\frac{7}{8} \times 4 = \frac{28}{32}$$

3) what is 18 as a decimal?

$$\frac{18}{20} \xrightarrow{\times 5} \frac{90}{100} = 0.90$$

$$\frac{18 \div 2}{20 \div 2} = \frac{9}{10} = 0.9$$

4) Reduce $\frac{36}{90}$

90

$$\frac{36 \div 3}{90 \div 3} = \frac{12 \div 2}{30 \div 2} = \frac{6 \div 3}{15 \div 3} = \frac{2}{5}$$

$$\frac{36 \div 18}{90 \div 18} = \frac{2}{5}$$

Grade 8 Unit 3: Fraction Day 1

Homework

Sheet 137

Solutions

1) For each fraction, write an equivalent fraction with denominator 10, 100, or 1000. Then, write the fraction as a decimal.

$$\text{a) } \frac{4}{5} \stackrel{\times 2}{=} \frac{8}{10} = 0.8 \quad \text{b) } \frac{3}{50} \stackrel{\times 2}{=} \frac{6}{100} = 0.06 \quad \text{c) } \frac{7}{20} \stackrel{\times 5}{=} \frac{35}{100} = 0.35 \quad \text{d) } \frac{19}{200} \stackrel{\times 5}{=} \frac{95}{1000} = 0.095$$

2) Use Equivalent Fractions to order the fractions from least to greatest

$$\begin{array}{cccccc} \frac{2}{3} & , & \frac{1}{2} & , & \frac{7}{24} & , & \frac{1}{12} & , & \frac{11}{12} \\ \downarrow & & \downarrow & & \downarrow & & \downarrow & & \downarrow \\ \underline{16} & & \underline{12} & & \underline{7} & & \underline{2} & & \underline{22} \\ 24 & & 24 & & 24 & & 24 & & 24 \end{array}$$

The fraction now with the largest numerator is the biggest

$$\frac{1}{12}, \frac{7}{24}, \frac{1}{2}, \frac{2}{3}, \frac{11}{12}$$

Sheet 137

Homework
Solutions

3 a) $\frac{2^{x3}}{3^{x3}} = \frac{6}{9}$

b) $\frac{3^{x4}}{4^{x4}} = \frac{12}{16}$

c) $\frac{12 \div 2}{10 \div 2} = \frac{6}{5}$

d) $\frac{30 \div 2}{40 \div 2} = \frac{15}{20}$

e) $\frac{5}{5} = \frac{15}{15}$

f) $\frac{15 \div 5}{10 \div 5} = \frac{3}{2}$

4 a) $\frac{1}{2}$ $\frac{1 \times 2}{2 \times 2} = \frac{2}{4}$, $\frac{1 \times 4}{2 \times 4} = \frac{4}{8}$, $\frac{1 \times 5}{2 \times 5} = \frac{5}{10}$

b) $\frac{3}{4}$ $\frac{3 \times 2}{4 \times 2} = \frac{6}{8}$, $\frac{3 \times 25}{4 \times 25} = \frac{75}{100}$, $\frac{3 \times 4}{4 \times 4} = \frac{12}{16}$

c) $\frac{7}{5}$ $\frac{7 \times 2}{5 \times 2} = \frac{14}{10}$, $\frac{7 \times 4}{5 \times 4} = \frac{28}{20}$, $\frac{7 \times 5}{5 \times 5} = \frac{35}{25}$

d) $\frac{1}{3}$ $\frac{1 \times 2}{3 \times 2} = \frac{2}{6}$, $\frac{1 \times 5}{3 \times 5} = \frac{5}{15}$, $\frac{1 \times 6}{3 \times 6} = \frac{6}{18}$

e) $\frac{3}{10}$ $\frac{9}{30}$, $\frac{6}{20}$, $\frac{30}{100}$

f) $\frac{4}{1}$ $\frac{8}{2}$, $\frac{24}{6}$, $\frac{12}{3}$

g) $\frac{2}{5}$ $\frac{4}{10}$, $\frac{6}{15}$, $\frac{8}{20}$

h) $\frac{4}{3}$ $\frac{8}{6}$, $\frac{12}{9}$, $\frac{16}{12}$

5. Lowest terms

Homework

Solutions

$$a) \frac{3}{12} \begin{array}{l} \div 3 \\ \div 3 \end{array} = \frac{1}{4}$$

$$b) \frac{8}{20} \begin{array}{l} \div 4 \\ \div 4 \end{array} = \frac{2}{5}$$

$$c) \frac{6}{16} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{3}{8}$$

$$d) \frac{12}{64} \begin{array}{l} \div 4 \\ \div 4 \end{array} = \frac{3}{16}$$

$$e) \frac{24}{80} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{12}{40} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{6}{20} \begin{array}{l} \div 2 \\ \div 2 \end{array} = \frac{3}{10} \quad \text{or} \quad \frac{24 \div 8}{80 \div 8} = \frac{3}{10}$$

$$f) \frac{15}{48} \begin{array}{l} \div 3 \\ \div 3 \end{array} = \frac{5}{16}$$

$$g) \frac{10}{5} \begin{array}{l} \div 5 \\ \div 5 \end{array} = \frac{2}{1}$$

$$h) \frac{75}{100} \begin{array}{l} \div 5 \\ \div 5 \end{array} = \frac{15}{20} \begin{array}{l} \div 5 \\ \div 5 \end{array} = \frac{3}{4}$$

$$\frac{75 \div 5}{100 \div 25} = \frac{15 \div 5}{20 \div 5} = \frac{3}{4}$$

Homework
Solutions

$$\frac{48 \div 2}{60 \div 2} = \frac{24 \div 6}{30 \div 6} = \frac{4}{5}$$

$$\frac{48 \div 12}{60 \div 12} = \frac{4}{5}$$

b. 32 students , 12 do not like pizza
so 20 like pizza

Fraction $\frac{20}{32} \div 4 \quad \frac{5}{8}$

Homework
Solutions

7. a) 4 eggs as a fraction
of a dozen

$$\frac{4}{12} = \frac{1}{3}$$

b) 15 min as a fraction
of an hour

$$\frac{15}{60} = \frac{1}{4}$$

c) 25¢ as a fraction
of a dollar

$$\frac{25}{100} = \frac{5}{20} = \frac{1}{4}$$

Homework
Solutions

8a) $\frac{5}{8} = \frac{20}{32}$

b) $\frac{9}{16} = \frac{36}{64}$

c) $\frac{1}{2} = \frac{15}{30}$

d) $\frac{3}{4} = \frac{9}{12}$

e) $\frac{1}{9} = \frac{21}{27}$

f) $\frac{20}{24} = \frac{5}{6}$

g) $\frac{3}{9} = \frac{12}{36}$

h) $\frac{7}{8} = \frac{42}{48}$

i) $\frac{2}{3} = \frac{10}{15}$

j) $\frac{6}{8} = \frac{12}{16}$

k) $\frac{5}{100} = \frac{1}{20}$

l) $\frac{45}{300} = \frac{15}{100}$

m) $\frac{2}{1} = \frac{32}{16}$

n) $\frac{8}{4} = \frac{4}{2}$

o) $\frac{5}{6} = \frac{20}{24}$

p) $\frac{1}{2} = \frac{10}{20}$

q) $\frac{6}{6} = \frac{36}{36}$

r) $\frac{3}{40} = \frac{15}{200}$

s) $\frac{3}{8} = \frac{30}{80}$

t) $\frac{4}{16} = \frac{2}{8}$

u) $\frac{7}{1} = \frac{21}{3}$

v) $\frac{8}{14} = \frac{48}{84}$

w) $\frac{5}{50} = \frac{10}{100}$

x) $\frac{2}{21} = \frac{6}{63}$

GREAT! You FIGURED IT OUT.

Mixed Numbers and Improper Fractions

A mixed number contains a whole and a fraction Example: $8 \frac{1}{3}$, $2 \frac{5}{7}$

An improper fraction is when the numerator is greater than the denominator

Example: $\frac{15}{7}$, $\frac{9}{2}$

Mixed Fraction to Improper Fraction

To change a mixed number to an improper fraction, **multiply the whole number by the denominator, then add the numerator to your answer.** This will give the numerator for the improper fraction, and the denominator always stays the same.

Ex 1) $8 \frac{1}{3}$

Side
 $(8 \times 3) + 1$
 $24 + 1$
 25

$= \frac{25}{3}$

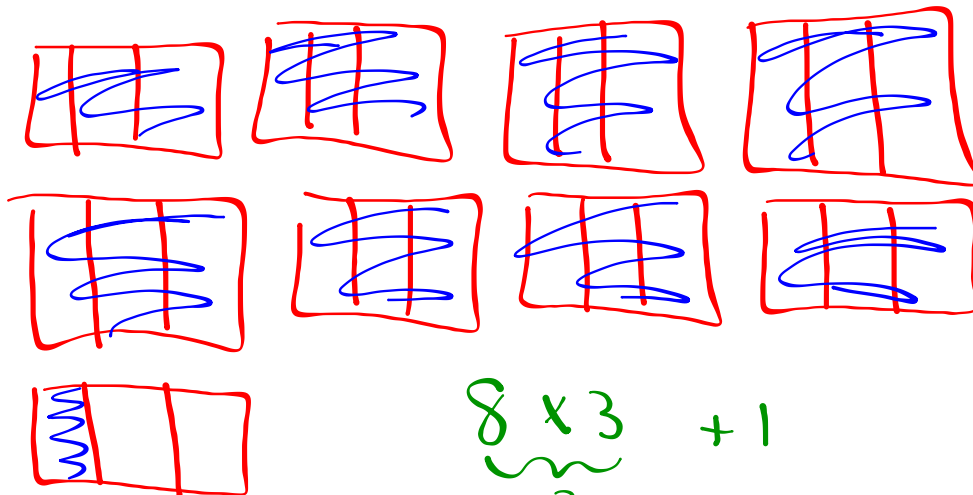
<http://www.youtube.com/watch?v=1BbNOWCQwB0>

Ex 2) $2 \frac{5}{7}$

Side
 $(2 \times 7) + 5$
 $14 + 5$
 19

$= \frac{19}{7}$

$$8 \frac{1}{3} = \frac{25}{3}$$



$$\begin{array}{r} 8 \times 3 + 1 \\ \hline 24 + 1 \\ 25 \end{array}$$

You try

$$a) 2\frac{3}{5} = \frac{13}{5}$$

$$b) 7\frac{1}{5} = \frac{36}{5}$$

$$\begin{array}{r} 2 \times 5 + 3 \\ 10 + 3 \\ \hline 13 \end{array}$$

Whole number times denom, then
add numerator \rightarrow numerator
stays same

Improper Fraction to Mixed Fraction

To change an improper fraction to a mixed number, **divide the numerator by the denominator, the answer will be the whole number part of the mixed number, and the remainder will be the numerator of the mixed number. The denominator stays the same.**

$$15 \div 7 = 2 \text{ R} = 1$$

Example 1: $\frac{15}{7} = 2 \frac{1}{7}$

$$7 \rightarrow 7, 14, \cancel{21}$$

$$\downarrow$$

$$2 \frac{1}{7}$$

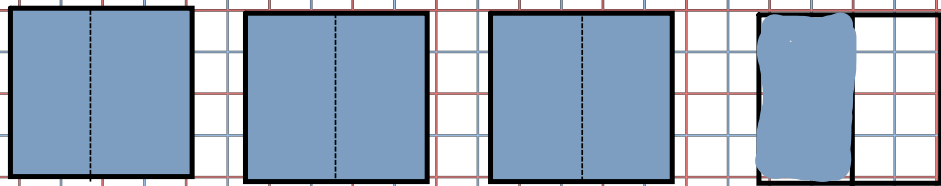
Example 2: $\frac{9}{2}$ ←

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

$$2 \rightarrow 2, 4, 6, 8, \cancel{10}$$

$$9 \div 2 = 4 \text{ R} \textcircled{1}$$

Write as a mixed fraction then an improper fraction.



$$3 \frac{1}{2} = \frac{7}{2}$$

Sheet 173



All questions

Attachments

Grade 8 Unit 3 Fractions WS 173 (Mixed & Improper).docx