

Vocab

fraction - part of a whole

denominator - bottom # of a fraction
tells the total # in whole

numerator - top # of a fraction
tells the "part" you're looking for

improper fraction - numerator is larger than denominator

mixed number - combination of a whole # & a fraction

equivalent - equal

Simplify - when the GCF for the numerator and denominator is 1

rational numbers - whole #s, fractions, + decimals

5-4 Simplifying Fractions + Ratios

ratio - comparison of 2 #'s by division

4 to 5 $\frac{4}{5}$ 4:5 4 out of 5

Simplify

$$1) \quad \frac{9}{21} = \boxed{\frac{3}{7}}$$

$$\textcircled{3} \begin{array}{r} 9 \ 21 \\ 3 \ 7 \end{array}$$

answer is here!!!

$$2) \quad \frac{24}{28} = \boxed{\frac{6}{7}}$$

$$\begin{array}{r} 2 \overline{) 24 \ 28} \\ 2 \overline{) 12 \ 14} \\ \underline{ 6 \ 7} \end{array}$$

answer

3) 49 : 56

$\boxed{7 : 8}$

* Treat just like a frac.

$$\begin{array}{r} 7 \overline{) 49 \quad 56} \\ \underline{7 \quad 8} \end{array}$$

* must write answer
in same form as question

4) 48 out of 64

$\boxed{3 \text{ out of } 4}$

$$\begin{array}{r} 2 \overline{) 48 \quad 64} \\ \underline{2 \quad 24 \quad 32} \end{array}$$

$$\begin{array}{r} 2 \overline{) 12 \quad 16} \\ \underline{2 \quad 6 \quad 8} \\ \quad 3 \quad 4 \end{array}$$

5) 82 to 100

$\boxed{41 \text{ to } 50}$

$$\begin{array}{r} 2 \overline{) 82 \quad 100} \\ \underline{41 \quad 50} \end{array}$$

Replace \square with a # to make equivalent fractions.

$$1) \frac{3 \cdot 3}{9 \cdot 3} = \frac{\square 9}{27}$$

* if gets larger mult.
if gets smaller divide

$$2) \frac{24 \div 12}{36 \div 12} = \frac{2}{\square 3}$$

* must be "fair" \rightarrow what you do to one part of frac. you MUST do to the other

$$3) \frac{13 \div 13}{78 \div 13} = \frac{1}{\square 6} \quad \begin{array}{r} 13 \\ \times 6 \\ \hline 78 \end{array}$$

5-5 Mixed Numbers + Improper fractions

Change mixed #s → improper fraction

$$1) \quad 1\frac{1}{2} = \frac{3}{2}$$

gets
numer.

1st mult. den. and
whole #

2nd add to numer.

$$2) \quad 2\frac{3}{4} = \frac{11}{4}$$


3rd keep the same
den.

$$3) \quad 4\frac{7}{9} = \frac{43}{9}$$

$$4) \quad 3\frac{5}{8} = \frac{29}{8}$$

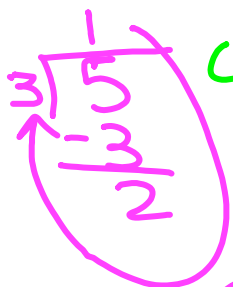
Change improper frac. \rightarrow mixed #

1) $\frac{11}{4} = 2 \frac{3}{4}$



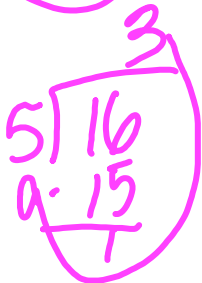
*like a clock

2) $\frac{5}{3} = 1 \frac{2}{3}$



Go clockwise

3) $\frac{16}{5} = 3 \frac{1}{5}$



1st divide numer. by den.

2nd quotient is whole #

3rd remainder is numer.

4th divisor is den. (den. does not change)

