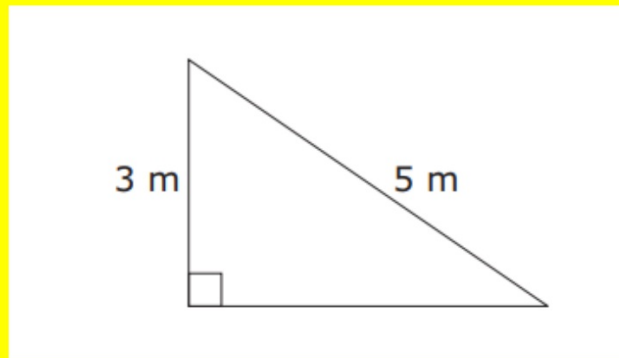


Warm Up

August 28, 2018



- 1.) Use the Pythagorean Theorem ($a^2 + b^2 = c^2$) to determine the length of the missing side.
- 2.) Determine the perimeter and area of the right triangle.

Adding and Subtracting Positive Rational Numbers

What is a rational number?

$$\frac{a}{b} \begin{array}{l} \leftarrow \text{integers} \\ \leftarrow b \neq 0 \end{array}$$

Rational Number:	5	$-1\frac{2}{5}$	0.25	$0.6\overline{6}$
	↓	↓	↓	
Fractional Form:	$\frac{5}{1}$	$-\frac{7}{5}$	$\frac{1}{4}$	

Any number that can be written as a fraction.

Adding and Subtracting Rational Numbers Includes:

$$6+8$$

$$1.5 - 0.78$$

$$\frac{1}{4} + \frac{3}{7}$$

*Today's
Focus*



Adding and Subtracting Decimals

Common error when adding and subtracting decimals

Not lining up the decimal points (and using the multiplication rule to place the decimal point in the answer)

Doing this	Instead of this
$\begin{array}{r} 23.6 \\ + 1.73 \\ \hline .409 \end{array}$	$\begin{array}{r} 23.60 \\ + 1.73 \\ \hline 25.33 \end{array}$

It helps if I add a zero on the right

$$23.6 + 1.73$$

Line up the decimal points or get an incorrect answer.

Practice Problems

$7.88 - 6.5 = \underline{\hspace{2cm}}$

$2.03 + .7 = \underline{\hspace{2cm}}$

$5.6 + 3.72 = \underline{\hspace{2cm}}$

$3.8 - 1.26 = \underline{\hspace{2cm}}$

$9 - .04 = \underline{\hspace{2cm}}$

$8.73 - 2.52 = \underline{\hspace{2cm}}$

$1 - .06 = \underline{\hspace{2cm}}$

$9.9 + .17 = \underline{\hspace{2cm}}$

Practice Problems

$$7.88 - 6.5 = 1.38$$

$$2.03 + .7 = 2.73$$

$$5.6 + 3.72 = 9.32$$

$$3.8 - 1.26 = 2.54$$

$$9 - .04 = 8.96$$

$$8.73 - 2.52 = 6.21$$

$$1 - .06 = 0.94$$

$$9.9 + .17 = 10.07$$

Adding and Subtracting Fractions

Adding/Subtracting Fractions with a Common Denominator

1. Add/Subtract the numerators.
2. Keep the denominator the same.
3. Simplify if needed.

Adding/Subtracting Fractions with Different Denominators

1. Rewrite using a common denominator.
2. Add/Subtract the fractions.
3. Simplify if needed.

What are some examples of fractions with common denominators?

different denominators?

Improper Fractions and Mixed Numbers

$$\frac{6}{4} \quad \frac{7}{5} \\ \frac{10}{7} \quad \frac{9}{4}$$



Based on these examples, how would you define improper fractions?

Based on these examples, how would you define mixed numbers?



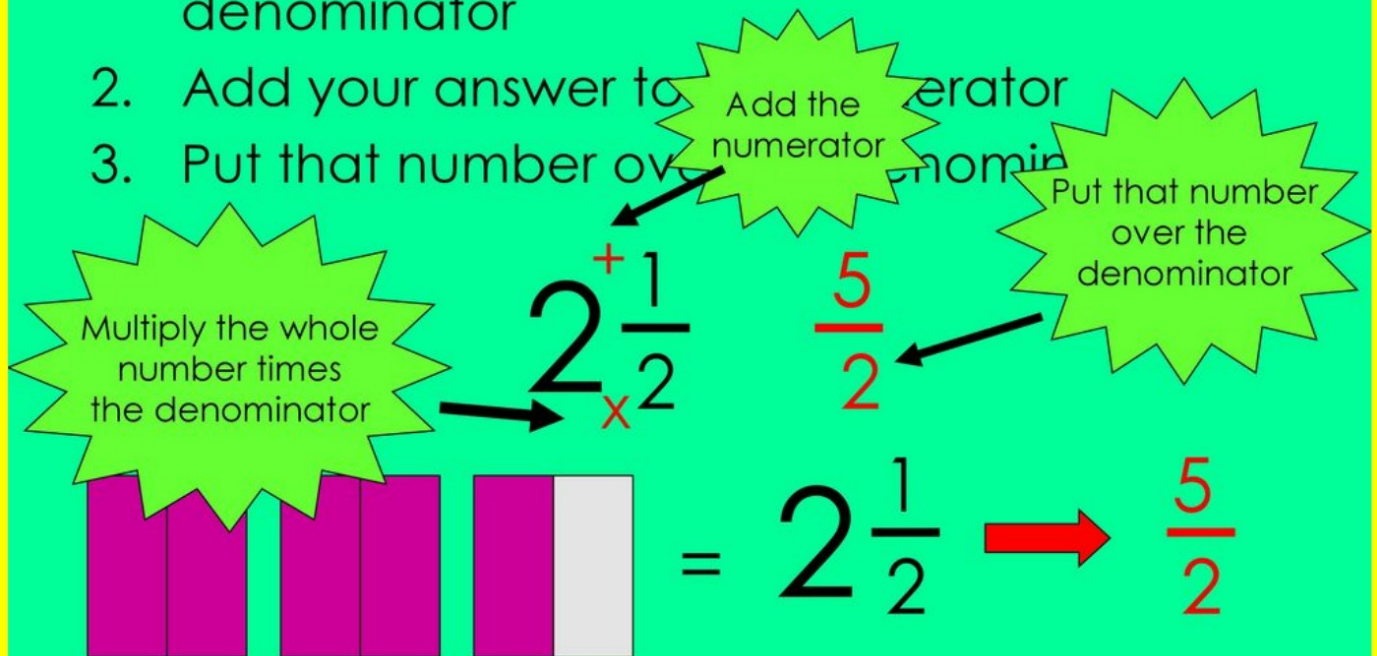
$$1\frac{3}{4}$$

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

$$2\frac{4}{5}$$

Mixed Number → Improper Fraction

1. Multiply the whole number times the denominator
2. Add your answer to the numerator
3. Put that number over the denominator



When is it best to use mixed numbers rather than improper fractions?

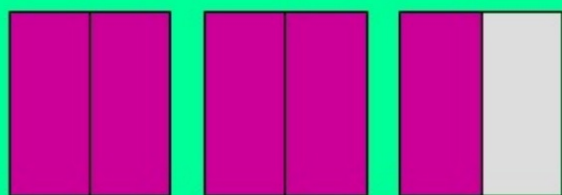
Improper Fraction → Mixed Number

1. Divide the numerator by the denominator
2. Put the remainder over the denominator

Divide the numerator by the denominator

$$\begin{array}{r} 2 \overline{)5} \\ \underline{-4} \\ 1 \end{array}$$

Write the remainder over the denominator



$$= \frac{5}{2} \rightarrow 2\frac{1}{2}$$

Match the correct mixed number to improper fraction.

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

$$\frac{10}{3}$$

$$3\frac{3}{4}$$

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

$$2\frac{3}{5}$$

$$\frac{21}{5}$$

$$4\frac{3}{7}$$

$$\frac{25}{4}$$

$$3\frac{1}{3}$$

$$\frac{36}{7}$$

$$5\frac{1}{7}$$

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

$$\frac{23}{7}$$

$$\frac{3}{2}$$

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

$$\frac{13}{5}$$

$$\frac{31}{7}$$

$$\frac{15}{4}$$

$$6\frac{1}{4}$$

$$4\frac{1}{5}$$

Write your answers in the simplest form.

$$\frac{3}{9} + \frac{4}{9} = \underline{\hspace{2cm}}$$

$$\frac{5}{12} + \frac{6}{12} = \underline{\hspace{2cm}}$$

$$\frac{9}{14} + \frac{2}{14} = \underline{\hspace{2cm}}$$

$$\frac{1}{6} + \frac{3}{6} = \underline{\hspace{2cm}}$$

$$\frac{5}{8} - \frac{1}{7}$$

$$\frac{3}{4} + \frac{2}{5}$$

$$3 - \frac{3}{7}$$

**Write your answers as an improper fraction, if necessary.*

$$\frac{1}{3} + \frac{1}{2}$$

Fractions to Decimals

$$5/8$$

$$7/20$$

$$1/125$$

Example: $\frac{3}{4} \rightarrow 3 \div 4$

$$4 \overline{)3.00} \begin{array}{r} .75 \\ -28 \\ \hline 20 \\ -20 \\ \hline 0 \end{array}$$

$\frac{3}{4} = 0.75$

wikidocs

Decimals to Fractions

$$0.08$$

$$.125$$

$$0.9$$

Decimal to Fraction

$$0.32 = \frac{32}{100} = \frac{8}{25}$$

hundredths

To convert a **decimal** to a **fraction**, identify the place value of the last decimal place. Write the decimal as a fraction using the place value as the denominator. Simplify the fraction.