

Warm Up

1. Five first cousins equally shared the cost of buying their favorite uncle a Christmas gift. The gift was \$180, but was on sale for 30% off. Tax on the gift was 8.25%. How much did each cousin pay individually?

- Ⓐ \$22.73
- Ⓑ \$136.40
- Ⓒ \$25.20
- Ⓓ \$27.28

2. Cody earns \$108 for working 5 hours. Which equation could be used to find the number of dollars, d , that Cody earns working 7 hours?

Ⓐ $\frac{108}{5} = \frac{d}{7}$

Ⓑ $\frac{5}{108} = \frac{d}{7}$

Ⓒ $\frac{108}{7} = \frac{5}{d}$

Ⓓ $\frac{108}{d} = \frac{5}{7}$

$$\frac{\text{dollars}}{\text{hours}} = \frac{\$}{h}$$

1) 180 → 30% off
 ① $180 \div 10 = 18$ which is 10%

$$\begin{array}{r} 18 \\ 18 \\ + 18 \\ \hline 54 \end{array}$$

$$\begin{array}{r} 710 \\ 180 \\ - 54 \\ \hline \$126 \end{array}$$

$$\begin{array}{r} 126 \\ \times .0825 \\ \hline 630 \\ 2520 \\ + 100800 \\ \hline 103950 \\ 10.395 \\ \hline \$10.40 \end{array}$$

$$\begin{array}{r} ② 126.00 \\ + 10.40 \\ \hline 136.40 \end{array}$$

$$\begin{array}{r} ③ \quad 27.28 \\ 5 \overline{) 136.40} \\ \underline{-10} \\ 36 \\ \underline{-35} \\ 10 \\ \underline{-10} \\ 0 \\ \underline{-0} \\ 0 \end{array}$$

$$\begin{array}{r} -10.40 \\ -54.00 \\ \hline \end{array}$$

Each cousin
paid \$27.28

Homework

Box 7: Adding and Subtracting Fractions # 4

Box 8: Adding and Subtracting Fractions #18

HW Answers

There are three types of fractions

Proper Fractions Example $\frac{4}{5}$

Mixed Fractions Example $2\frac{1}{8}$

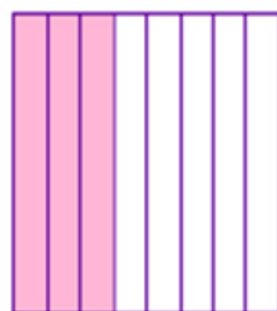
Improper Fractions Example $\frac{13}{12}$

The easiest way to multiply or divide fractions is to use improper fractions and proper (common) fractions ONLY!

Multiplying

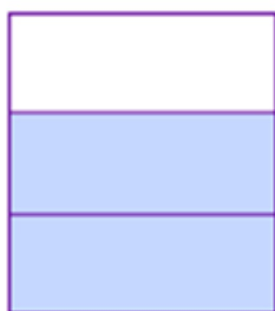
Fractions

Shade one square, partitioned vertically, to represent $\frac{3}{8}$ (shown below in pink):



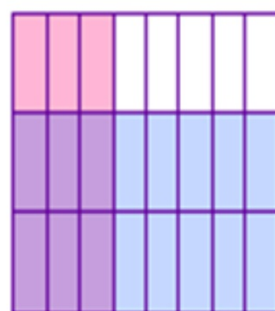
$$\frac{3}{8}$$

Shade another square, partitioned horizontally, to represent $\frac{2}{3}$ (shown below in blue):



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

Superimpose the two squares. The product is the area that is double-shaded (shown below in purple):



$$\frac{3}{8} \cdot \frac{2}{3} = \frac{3 \cdot 2}{8 \cdot 3}$$

Multiply the numerators

$$\frac{3}{5} \times \frac{2}{3} = \frac{6}{15}$$

Multiply the denominators

Example 1: Multiply the following.

1. $\frac{4}{5} \times \frac{4}{5} =$

2. $\frac{4}{2} \cdot \frac{4}{5} =$

3. $\frac{1}{3} \times \frac{4}{7} =$

4. $\frac{2}{3} \times \frac{4}{15} =$

Example 1: Multiply the following.

$$1. \frac{4}{5} \times \frac{4}{5} = \frac{16}{25}$$

$$2. \frac{4}{2} \cdot \frac{4}{5} = \frac{16}{10} = \frac{8}{5}$$

~~$\frac{2(8)}{2(5)}$~~ = $\frac{8}{5}$

$$3. \frac{1}{3} \times \frac{4}{7} = \frac{4}{21}$$

$$4. \frac{2}{3} \times \frac{4}{15} = \frac{8}{45}$$

$$5. \quad 1 \frac{2}{5} \cdot \frac{4}{5} =$$

$$6. \quad 2 \frac{2}{3} \cdot 4 \frac{1}{6} =$$

$$5. 1\frac{2}{5} \cdot \frac{4}{5} =$$

$$\frac{7}{5} \cdot \frac{4}{5} = \frac{28}{25}$$

$$6. 2\frac{2}{3} \cdot 4\frac{1}{6} =$$

$$\text{1st way} \quad \frac{8}{3} \cdot \frac{25}{6} = \frac{200}{18}$$

$$\frac{\cancel{2}(100)}{\cancel{2}(9)} = \frac{100}{9}$$

$$\text{2nd way} \quad \frac{\cancel{8}^{\cancel{2}(4)}}{3} \cdot \frac{25}{\cancel{6}_{\cancel{2}(3)}} = \frac{100}{9}$$

Homework

Multiplying Fractions

$$1) \frac{3}{5} \times \frac{9}{10} =$$

$$2) \frac{3}{4} \times \frac{4}{5} =$$

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

$$4) \frac{1}{2} \times \frac{3}{5} =$$

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

$$6) \frac{1}{2} \times \frac{2}{4} =$$

$$7) \frac{5}{10} \times \frac{3}{4} =$$

$$8) \frac{2}{3} \times \frac{3}{10} =$$

$$9) \frac{4}{5} \times \frac{1}{3} =$$

$$10) \frac{2}{5} \times \frac{2}{3} =$$