

key

Extra Practice Unit 2-Fractions

Multiplying Fractions

1. Calculate the following expressions. Simplify to lowest terms.

a. $\frac{4}{5} \times \frac{2}{7} = \frac{4 \times 2}{5 \times 7} = \frac{8}{35}$

b. $\frac{3}{9} \times \frac{12}{15} = \frac{3 \times 12}{9 \times 15} = \frac{36}{135} \div 9 = \frac{4}{15}$

c. $\frac{3}{6} \times \frac{1}{2} = \frac{3 \times 1}{6 \times 2} = \frac{3}{12} = 1 \frac{1}{4}$
Handwritten notes: $3 \times 6 = 18$, $18 \div 5 = 23$

d. $\frac{3}{4} \times \frac{7}{1} = \frac{3 \times 7}{4 \times 1} = \frac{21}{4} = 5 \frac{1}{4}$

2. On Wednesday the farmers at the Clinton Farm picked $\frac{9}{10}$ of a barrel of tomatoes.

Thursday, the farmers picked $\frac{1}{3}$ as many tomatoes as on Wednesday. How many barrels of tomatoes did the farmers pick on Thursday?

$$\frac{9}{10} \times \frac{1}{3} = \frac{9}{30} = \frac{3}{10}$$

He picked $\frac{3}{10}$ of a barrel of tomatoes.

3. Last month, Marlon and Jennifer sold candy to raise money for their debate team.

Jennifer sold $\frac{2}{3}$ as much candy as Marlon did. If Marlon sold $\frac{1}{5}$ of a box of candy, how many boxes of candy did Jennifer sell?

$$\frac{2}{3} \times \frac{1}{5} = \frac{2}{15}$$

Jennifer sold $\frac{2}{15}$ of a box of candy.

4. Wilson Middle School is holding a fundraiser and plans to use $\frac{3}{10}$ of the money collected to build a new library. Of the money directed towards building the new library, $\frac{2}{3}$ will go towards purchasing computers. What fraction of the money raised will go towards purchasing computers for the library?

$$\frac{3}{10} \times \frac{2}{3} = \frac{6}{30} = \frac{1}{5}$$

One fifth of the money will go towards new computers.

Dividing Fractions

*Keep
change
Flip. *

1. Calculate the following expressions. Simplify to lowest terms.

a. $\frac{3}{4} \div \frac{5}{6} = \frac{3}{4} \times \frac{6}{5} = \frac{18}{20} = \frac{9}{10}$

b. $\frac{9}{5} \div \frac{3}{2} = \frac{9}{5} \times \frac{2}{3} = \frac{18}{15} = \frac{6}{5} = 1\frac{1}{5}$

c. $\frac{1}{6} \div 2\frac{2}{4} = \frac{1}{6} \times \frac{4}{10} = \frac{4}{60} = \frac{1}{15}$

d. $3 \div \frac{4}{9} = \frac{3}{1} \times \frac{9}{4} = \frac{27}{4} = 6\frac{3}{4}$

$2 \times 4 = 8$
 $8 \div 2 = 10$
 $\frac{10}{4}$

2. A factory used $\frac{1}{2}$ of a barrel of almonds to make 2 batches of granola bars. How many barrels of almonds did the factory put in each batch?

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

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

$\frac{1}{4}$ barrels of almonds per batch.

3. A gardener spread $\frac{1}{2}$ of a bag of mulch evenly over his 5 equal-sized vegetable beds. How much mulch did he put on each vegetable bed?

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

$\frac{1}{2} \times \frac{1}{5} = \frac{1}{10}$

$\frac{1}{10}$ on each veggie bed.

4. Peter wants to make brownies. To make brownies, he needs $\frac{1}{2}$ of a cup of flour per batch of brownies. If Peter has 3 cups of flour, then how many batches of brownies can Peter make?

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

$3 \times \frac{2}{1} = \frac{6}{1}$

He can make 6 batches of cookies

5. Joey bought 4 cans of paint and $\frac{1}{2}$ of a pint of special paint additive formulated to reduce mildew. Before painting his house, he divided the additive equally among the 4 cans of paint. How much additive did he put in each can?

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

$\frac{1}{2} \times \frac{1}{4} = \frac{1}{8}$

He added $\frac{1}{8}$ of the additive to each can.

Bedmas

Brackets
Exponents
Division
multiplication
Add
subtract

1. Calculate the following expressions. Simplify to lowest terms.

a. $\frac{1}{4} - \frac{5}{6} \times \frac{1}{6}$

$$\frac{1}{4} - \frac{5}{6} \times \frac{1}{6}$$

$$\frac{9 \times 1}{9 \times 4} - \frac{5}{36}$$

b. $\frac{3}{5} \div \frac{5}{6} + \frac{1}{5}$

$$\frac{3}{5} \div \frac{5}{6} + \frac{1}{5}$$

$$\frac{18}{25} + \frac{1}{5} \times \frac{5}{5} \rightarrow \frac{18}{25} + \frac{5}{25} = \boxed{\frac{23}{25}}$$

c. $\frac{3}{5} \times \left(\frac{1}{2} + \frac{2}{9} \right)$

$$\frac{9 \times 1}{9 \times 2} + \frac{2}{9 \times 2}$$

$$\frac{9}{18} + \frac{4}{18} = \frac{13}{18}$$

$$\frac{3}{5} \times \frac{13}{18} = \frac{39 \div 3}{90 \div 3} = \boxed{\frac{13}{30}}$$

d. $\left(\frac{5}{6} - \frac{2}{5} \right) \div \frac{3}{4}$

$$\frac{5 \times 5}{5 \times 6} - \frac{2 \times 6}{5 \times 6}$$

$$\frac{25}{30} - \frac{12}{30} = \frac{13}{30} \div \frac{3}{4} \rightarrow \frac{13}{30} \times \frac{4}{3} = \frac{52 \div 2}{90 \div 2} = \boxed{\frac{26}{45}}$$

e. $\frac{2}{4} \div \left(\frac{3}{8} - \frac{2}{3} \right) \times \frac{2}{1}$

$$\frac{3 \times 3}{3 \times 8} - \frac{2 \times 8}{3 \times 8}$$

$$\frac{9}{24} - \frac{16}{24} = -\frac{7}{24}$$

$$\frac{2}{4} \div \left(-\frac{7}{24} \right) \times \frac{2}{1}$$

$$\frac{2}{4} \times \frac{24}{7} = -\frac{48}{28} \times \frac{2}{1} = \frac{-96}{28} = 3 \frac{12}{28}$$

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

2. Where can you place the brackets to make this true?

$$\frac{2}{3} + \frac{3}{4} \times \frac{4}{5} - \frac{1}{5} = \frac{14}{15}$$

$$\left(\frac{2 \times 4}{3 \times 4} + \frac{3}{5} \right) \times \frac{4}{5} - \frac{1}{5} = \frac{14}{15}$$

$$\left(\frac{8}{12} + \frac{9}{12} \right)$$

$$\frac{17}{12} \times \frac{4}{5} - \frac{1}{5} = \frac{14}{15}$$

$$\frac{68}{60} - \frac{1 \times 12}{5 \times 12}$$

$$\frac{68}{60} - \frac{12}{120} = \frac{56 \div 4}{60 \div 4} = \frac{14}{15}$$

* Trial and error.

Choose 2 fractions to start. Solve equation to see if they were correct.

$$\left(\frac{2}{3} + \frac{3}{4} \right) \times \frac{4}{5} - \frac{1}{5} = \frac{14}{15}$$

✓

