

Multiplying Fractions



- When multiplying fractions, you simply multiply across.
- First, you multiply the numerators.
- Next, you multiply the denominators.
- Finally, you reduce the fraction if necessary.

Example: $\frac{4}{5} \times \frac{2}{8} = ?$

$$\begin{array}{l} \text{multiply} \\ \text{numerators} \end{array} \frac{4 \times 2}{\begin{array}{l} \text{multiply} \\ \text{denominators} \end{array} 5 \times 8} = \frac{8}{40} \xrightarrow{\text{reduce}} \frac{1}{5} \xrightarrow{\text{final answer}}$$

Quick
Reminder

X ← numerator

—

Y ← denominator

For each problem below, follow the steps used in the example to find your solution.
Be sure to reduce your fraction to its lowest terms.

$$1) \frac{3}{6} \times \frac{3}{2} = \frac{9}{12} = \frac{3}{4}$$

$$5) \frac{20}{40} \times \frac{2}{2} = \frac{40}{80} = \frac{1}{2}$$

$$2) \frac{4}{7} \times \frac{5}{8} = \frac{20}{56} = \frac{5}{14}$$

$$6) \frac{2}{6} \times \frac{6}{2} = \frac{12}{12} = 1$$

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

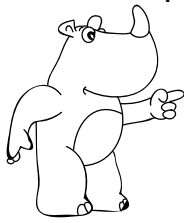
$$7) \frac{5}{25} \times \frac{4}{1} = \frac{20}{25} = \frac{4}{5}$$

$$4) \frac{15}{17} \times \frac{6}{6} = \frac{90}{102} = \frac{45}{51} = \frac{15}{17}$$

$$8) \frac{9}{9} \times \frac{1}{1} = \frac{9}{9} = 1$$

Multiplying Fractions

Multiplying fractions by a whole number is very similar to multiplying two fractions. Follow the steps below to find out how.



- First, make the whole number a fraction by putting it over 1.
- Second, multiply the top numbers, or the *numerators*.
- Next, multiply the bottom numbers, or the *denominators*.
- Last, simplify your fraction if necessary.

Example: $\frac{2}{3} \times 5 = ?$

make the whole
number a
fraction

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

multiply the
top numbers
(numerators)

$$2 \times 5 = 10$$

multiply the
bottom numbers
(denominators)

$$3 \times 1 = 3$$

write your
result

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

For each problem below, follow the steps used in the example to find your solution. Be sure to reduce your fraction to its lowest terms.

$$1) 3 \times \frac{2}{9} = \frac{3}{1} \times \frac{2}{9} = \frac{6}{9} = \frac{2}{3}$$

$$5) 4 \times \frac{3}{15} = \frac{4}{1} \times \frac{3}{15} = \frac{12}{15} = \frac{4}{5}$$

$$2) 2 \times \frac{9}{19} = \frac{2}{1} \times \frac{9}{19} = \frac{18}{19}$$

$$6) 6 \times \frac{3}{24} = \frac{6}{1} \times \frac{3}{24} = \frac{18}{24} = \frac{3}{4}$$

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

$$7) 1 \times \frac{5}{5} = \frac{1}{1} \times \frac{5}{5} = \frac{5}{5} = 1$$

$$4) 5 \times \frac{1}{7} = \frac{5}{1} \times \frac{1}{7} = \frac{5}{7}$$

$$8) 10 \times \frac{1}{16} = \frac{10}{1} \times \frac{1}{16} = \frac{10}{16} = \frac{5}{8}$$