

## MULTIPLYING FRACTIONS

↳ EXAMPLE 1:

$$a) \frac{1}{2} \cdot \frac{8}{3}$$

consider the question,  
What is one half of 8 apples?  
\_\_\_\_\_ apples.

So, what is one half of 8 thirds?  
\_\_\_\_\_ thirds

Therefore:  $\frac{1}{2} \cdot \frac{8}{3} = \frac{4}{3}$

Another approach:

$$\frac{1}{2} \cdot \frac{8}{3} = \frac{1 \cdot 8}{2 \cdot 3} = \frac{8}{6} = \frac{4}{3}$$

$$b) \frac{40}{3} \cdot \frac{9}{10}$$

↪ example 2:

$$a) \frac{2}{3} \cdot \frac{4}{5} =$$

$$b) \frac{1}{4} \cdot 9 =$$

$$c) \frac{2}{3} \cdot 7 =$$

$$d) \frac{2}{5} \cdot \frac{3}{5} \cdot \frac{4}{5} =$$

$$e) \left(-\frac{2}{3}\right)\left(\frac{7}{6}\right) =$$

↳ example 3:

$$a) \frac{x}{y} \cdot \frac{y}{x} =$$

$$b) \frac{ab}{c} \cdot \frac{c}{a} \cdot \frac{c}{b} =$$

$$c) \frac{72}{35} \cdot \frac{55}{108} \cdot \frac{14}{110} =$$

↳ example 4:

$$a) \left(\frac{1}{3}\right)^2 =$$

$$b) \left(-\frac{3}{4}\right)^2 =$$

$$c) \left(\frac{1}{2}\right)^2 \cdot 8 + \left(\frac{2}{3}\right)^2 \cdot 9$$

$$d) \left(-\frac{1}{2}\right)^2 - 9\left(\frac{1}{3}\right)^2$$

MULTIPLYING FRACTIONS Practice Problems

1.  $\frac{1}{2} \cdot \frac{10}{7}$

2.  $6\left(\frac{2}{3}\right)$

3.  $\frac{2}{7} \cdot \frac{3}{7} \cdot \frac{1}{2}$

4.  $\left(-\frac{1}{4}\right)\left(\frac{8}{9}\right)$

5.  $\frac{21}{64} \cdot \frac{16}{5} \cdot \frac{25}{7}$

6.  $\left(\frac{1}{2}\right)^3 \cdot 4$