

Name KEY

Section _____

MULTIPLYING FRACTIONS

To multiply fractions, multiply the numerators and multiply the denominators.
Reduce your answer when necessary.

$$\frac{3}{4} \times \frac{2}{5} = \frac{3 \times 2}{4 \times 5} = \frac{6}{20} = \frac{3}{10}$$

If the numerators and denominators have common factors, divide by the common factors before multiplying.

$$\frac{5}{12} \times \frac{8}{15} = \frac{5 \times 8}{12 \times 15}$$

$$= \frac{\overset{\cancel{5}}{1} \times \overset{\cancel{8}}{2}}{\overset{\cancel{3}}{4} \times \overset{\cancel{3}}{5}}$$

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

$$= \frac{2}{9}$$

I. Solve the following. Simplify before multiplying, if possible.

$$a) \frac{\overset{1}{\cancel{2}}}{\cancel{2}} \times \frac{\overset{1}{\cancel{1}}}{\cancel{5}} = \frac{1}{10}$$

$$b) \frac{\overset{1}{\cancel{2}}}{\cancel{2}} \times \frac{\overset{1}{\cancel{2}}}{\cancel{2}} = \frac{1}{2}$$

$$c) \frac{\overset{1}{\cancel{2}}}{\cancel{4}} \times \frac{\overset{7}{\cancel{2}}}{\cancel{3}} = \frac{7}{12}$$

$$d) \frac{\overset{4}{\cancel{2}}}{\cancel{3}} \times \frac{\overset{1}{\cancel{2}}}{\cancel{5}} = \frac{4}{15}$$

$$e) \frac{\overset{1}{\cancel{2}}}{\cancel{3}} \times \frac{\overset{1}{\cancel{2}}}{\cancel{6}} = \frac{1}{6}$$

$$f) \frac{\overset{1}{\cancel{2}}}{\cancel{2}} \times \frac{\overset{3}{\cancel{2}}}{\cancel{4}} = \frac{3}{2} = 1\frac{1}{2}$$

$$g) \frac{\overset{5}{\cancel{2}}}{\cancel{4}} \times \frac{\overset{20}{\cancel{5}}}{\cancel{3}} = \frac{25}{12} = 2\frac{1}{12}$$

$$h) \frac{\overset{5}{\cancel{2}}}{\cancel{2}} \times \frac{\overset{1}{\cancel{2}}}{\cancel{3}} = \frac{5}{6}$$

$$\begin{array}{r} 12 \overline{) 25} \\ \underline{-24} \\ 1 \end{array}$$

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i) $4\frac{12}{8} \times \frac{10}{8} = \frac{8}{3} = 2\frac{2}{3}$

j) $3\frac{20}{8} \times \frac{3}{2} = \frac{9}{8} = 1\frac{1}{8}$

k) $2\frac{8}{7} \times \frac{2}{1} = \frac{4}{7}$

l) $1\frac{5}{2} \times \frac{8}{10} = \frac{1}{4}$

m) $1\frac{1}{15} \times \frac{10}{2} = \frac{2}{9}$

n) $4\frac{14}{5} \times \frac{1}{3} = \frac{4}{15}$

II. Match each question to the correct product.

a) $\frac{5}{3} \times \frac{2}{7} = \frac{5}{21}$

i) $\frac{1}{4}$

b) $1\frac{8}{2} \times \frac{1}{2}$

ii) $\frac{1}{6}$

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

iii) $\frac{5}{21}$

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

iv) 1

III. Solve the following.

a) In the school band, $\frac{3}{5}$ of the students play trumpet. Of these, $\frac{1}{6}$ also play the trombone. What fraction of the students in the band play both trumpet and trombone?

$2\frac{1}{6} \times \frac{1}{5}$

$1\frac{1}{10}$

~~of the student~~

$\frac{1}{10}$ of the students in the band play both trumpet and trombone.

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- b) Jeremy ate $\frac{1}{3}$ of an apple pie. Sara ate $\frac{1}{4}$ of the remainder. What fraction of the pie did Sara eat?

~~Handwritten scribbles~~



$$\frac{2}{3} = r$$

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

- $\frac{2}{3}$ of the pie was left after Jeremy had his share. So, Sara ate $\frac{1}{6}$ of the pie.

- c) Taiya spent $\frac{5}{8}$ of $\frac{2}{3}$ of her allowance on Hi-Chews. What fraction of her total allowance did she spend on Hi-Chews? What fraction did she have left?

$$\frac{5}{8} \times \frac{2}{3} = \frac{5}{12}$$

$$\frac{1}{12} \times \frac{7}{12} = \frac{7}{12}$$

- Taiya spent $\frac{5}{12}$ of her allowance on Hi-Chews. She had $1 - \frac{5}{12} = \frac{7}{12}$ of her allowance left.