

Name: Class:

Multiply a mixed number by a fraction

Multiply the following. Write your answer as a fraction or as a whole or mixed number.

a. $\frac{3}{4} \times 5\frac{2}{5}$

b. $9\frac{1}{2} \times 10\frac{2}{7}$

c. $\frac{1}{3} \times 12\frac{1}{4}$

d. $\frac{2}{5} \times 2\frac{1}{5}$

e. $7\frac{3}{5} \times 12\frac{5}{8}$

f. $\frac{2}{3} \times 16\frac{1}{2}$

g. $\frac{2}{8} \times 7\frac{2}{7}$

h. $7\frac{2}{5} \times 15\frac{2}{3}$

i. $\frac{1}{2} \times 18\frac{1}{2}$

j. $\frac{2}{6} \times 12\frac{1}{2}$

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Multiply the following. Write your answer as a fraction or as a whole or mixed number.

a. $\frac{3}{4} \times 5\frac{2}{5}$

Let's first of all convert $5\frac{2}{5}$ into an improper fraction.

$$5\frac{2}{5} = \frac{(5 \times 5) + 2}{5} = \frac{27}{5}$$

Now, let's multiply.

$$\frac{3}{4} \times \frac{27}{5} = \frac{3 \times 27}{4 \times 5} = \frac{81}{20}$$

Finally, let's simplify our answer.

$$\frac{81}{20} = 20 \overline{) 81} \begin{array}{r} 4 \\ - 80 \\ \hline 1 \end{array} = 4\frac{1}{20}$$

So, $\frac{3}{4} \times 5\frac{2}{5} = 4\frac{1}{20}$

b. $9\frac{1}{2} \times 10\frac{2}{7}$

Let's first of all convert $9\frac{1}{2}$ and $10\frac{2}{7}$ into improper fractions.

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

$$10\frac{2}{7} = \frac{(10 \times 7) + 2}{7} = \frac{72}{7}$$

Now, let's multiply.

$$\frac{19}{2} \times \frac{72}{7} = \frac{19 \times 72}{2 \times 7} = \frac{1,368}{14}$$

Finally, let's simplify our answer.

$$\frac{1,368}{14} = 14 \overline{) 1,368} \begin{array}{r} 97 \\ - 126 \\ \hline 108 \\ - 98 \\ \hline 10 \end{array} = 97\frac{10}{14} \rightarrow 97\frac{5}{7}$$

So, $9\frac{1}{2} \times 10\frac{2}{7} = 97\frac{5}{7}$

c. $\frac{1}{3} \times 12\frac{1}{4}$

Let's first of all convert $12\frac{1}{4}$ into an improper fraction.

$$12\frac{1}{4} = \frac{(4 \times 12) + 1}{4} = \frac{49}{4}$$

Now, let's multiply.

$$\frac{1}{3} \times \frac{49}{4} = \frac{1 \times 49}{3 \times 4} = \frac{49}{12}$$

Finally, let's simplify our answer.

$$\frac{49}{12} = 12 \overline{) 49} \begin{array}{r} 4 \\ - 48 \\ \hline 1 \end{array} = 4\frac{1}{12}$$

So, $\frac{1}{3} \times 12\frac{1}{4} = 4\frac{1}{12}$