

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



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## Multiply a mixed number by a fraction

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

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

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

$$\frac{81}{20} = 20 \overline{)81} \\ \underline{-80} \phantom{0} \\ 1$$

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

$$\frac{1,368}{14} = 14 \overline{)1,368} \\ \underline{-126} \phantom{0} \\ 108 \\ \underline{-98} \\ 10$$

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

$$\frac{49}{12} = 4 \overline{)49} \\ \underline{-48} \\ 1$$

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

