

Warm up

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Convert each fraction to a decimal.

$$\frac{3}{8} \quad \begin{array}{r} \overline{)3.75} \\ 8 \overline{)3.000} \\ \underline{-24} \phantom{0} \\ 60 \phantom{0} \\ \underline{-60} \\ 0 \end{array} \quad \frac{4}{9} \quad \begin{array}{r} \overline{)4.4} \\ 9 \overline{)4.000} \\ \underline{-36} \phantom{0} \\ 40 \phantom{0} \\ \underline{-36} \\ 40 \end{array} \quad \frac{3}{5} \quad \begin{array}{r} \overline{)3.0} \\ 5 \overline{)3.0} \\ \underline{-30} \\ 0 \end{array}$$

Multiply

$$+ \begin{array}{r} 1 \phantom{0} \\ 3 \frac{1}{3} \cdot 4 \frac{3}{4} \\ \times \phantom{0} \\ \hline 5 \frac{10}{12} \cdot \frac{19}{4} \\ \hline 15 \frac{10}{12} = 15 \frac{5}{6} \end{array} \rightarrow \frac{5}{3} \cdot \frac{19}{2} = \frac{95}{6} = 15 \frac{5}{6}$$

$$\begin{array}{r} 15 \\ 12 \overline{)190} \\ \underline{-12} \phantom{0} \\ 70 \\ \underline{-60} \\ 10 \end{array}$$

$$\begin{array}{r} 15 \\ 12 \overline{)190} \\ \underline{-12} \\ 70 \\ \underline{-60} \\ 10 \end{array}$$

$$\frac{10}{3} \cdot \frac{19}{4} = \frac{190}{12}$$

$$15 \frac{10}{12}$$



NAME \_\_\_\_\_ DATE \_\_\_\_\_ PERIOD \_\_\_\_\_

**6-4****Study Guide and Intervention****Multiplying Fractions and Mixed Numbers**

To multiply fractions, multiply the numerators and multiply the denominators.

$$\frac{5}{6} \times \frac{3}{5} = \frac{5 \times 3}{6 \times 5} = \frac{15}{30} = \frac{1}{2}$$

To multiply mixed numbers, rename each mixed number as a fraction. Then multiply the fractions.

$$2\frac{2}{3} \times 1\frac{1}{4} = \frac{8}{3} \times \frac{5}{4} = \frac{40}{12} = 3\frac{1}{3}$$

**EXAMPLE 1** Find  $\frac{2}{3} \times \frac{4}{5}$ . Write in simplest form.

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

← Multiply the numerators.

← Multiply the denominators.

$$= \frac{8}{15}$$

Simplify.

**EXAMPLE 2** Find  $\frac{1}{3} \times 2\frac{1}{2}$ . Write in simplest form.

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

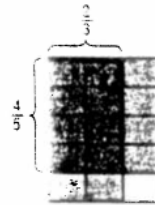
Rename  $2\frac{1}{2}$  as an improper fraction,  $\frac{5}{2}$ .

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

Multiply.

$$= \frac{5}{6}$$

Simplify.

**EXERCISES**

Multiply. Write in simplest form.

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

$\frac{4}{9}$

2.  $\frac{1}{2} \times \frac{7}{8}$

$\frac{7}{16}$

3.  $\frac{1}{3} \times \frac{3}{5}$

$\frac{1}{5}$

4.  $\frac{5}{9} \times 4$

$2\frac{2}{9}$

5.  $1\frac{2}{3} \times \frac{3}{5}$

1

6.  $3\frac{3}{4} \times 1\frac{1}{6}$

$4\frac{3}{8}$

7.  $\frac{3}{4} \times 1\frac{2}{3}$

$1\frac{1}{4}$

8.  $3\frac{1}{3} \times 2\frac{1}{2}$

$8\frac{1}{3}$

9.  $4\frac{1}{3} \times \frac{1}{7}$

$\frac{3}{5}$

10.  $\frac{7}{5} \times 8$

$11\frac{1}{5}$

11.  $2\frac{1}{3} \times \frac{4}{6}$

$1\frac{5}{9}$

12.  $\frac{1}{8} \times 2\frac{3}{4}$

$\frac{11}{32}$

Order Each set From Least To Greatest (Use the correct inequality symbol)

1) 8.16, 15.28,  $5.2 \times 10^1$ , 4.9, 51%,  $\frac{84}{6}$       2) 12%,  $\frac{2}{5}$ , 0.5, 0.33%, 14,  $1.63 \times 10^{-2}$

*Handwritten work:* 52, .51, 14, 84/6, 15.28, 5.2 x 10^1, .33%, 1.63 x 10^-2, 12%, 2/5, .5, 14

3)  $8.4 \times 10^{-1}$ , 32.4%, 8,  $\frac{3}{4}$ ,  $\frac{1}{4}$ , 75%      4)  $\frac{4}{7}$ , 450%, 0.6, 5.3,  $\frac{1}{6}$ ,  $4.7 \times 10^2$

*Handwritten work:* .324, .25, 3/4, 75%, 8.4 x 10^-1, 8, 1/6, 4/7, .6, 450%, 5.3, 4.7 x 10^2

5) The U.S Women's Soccer Team goalies' saves are shown below. Rank the goalies from most saves to least saves. Show work to support your answer and explain.

Player	Saves
Christina Reuter	$\frac{64}{71}$
Chantel Jones	0.906
Amber Campbell	90.4%

*Handwritten work:* 3, .901, 1, 2

## Model Dividing Fractions

Ex.  $4 \div \frac{1}{2}$

Draw 4 boxes. Shade in all four.

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Under the boxes draw four more.

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Divide the new boxes into 2 sections.

Shade in each new section.

Answer:

- The number of shaded boxes in the bottom row.

Ex.  $\frac{2}{5} \div \frac{1}{10}$

Draw one box and divide it into 5 sections.

Shade in two of them ( $\frac{2}{5}$ ).

Draw one box under the first and divide it into 10 sections.

Shade in the number of sections that are equal to the first shaded area.

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Answer: the number of boxes in the bottom row that are shaded.

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Ex.  $\frac{5}{8} \div \frac{1}{16}$

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$$\frac{2}{3} \div \frac{2}{15}$$

KISS

P. 46

÷ fractions

Keep × Switch Switch

$$\frac{2}{3} \div \frac{2}{15}$$

Reciprocal

$$\frac{2}{3} \times \frac{15}{2} = \frac{30}{6} = \textcircled{5}$$

$$2\frac{3}{4} \div 1\frac{1}{2}$$

① mixed  $\rightarrow$  Improper

$$\frac{11}{4} \div \frac{3}{2}$$

② KISS

$$\frac{11}{4} \times \frac{2}{3}$$

③ solve, Simplify

$$\frac{22}{12} = 1\frac{10}{12} \rightarrow \left(\frac{5}{6}\right)$$



IXL 6th Grade Lesson N.4  
Review Subtract Integers

Group 1 - versatiles

Group 2 - IXL

Group 3 - Order Rational Numbers

Group 4 - IXL

Group 5 - Order Rational Numbers

Group 6 - Teacher

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6th grade

Lessons K11 and L7

Work on each lesson until  
you reach smart score of  
80.

- homework

Divide.

1.  $\frac{3}{10} + \frac{4}{5}$

2.  $\frac{5}{6} + \frac{3}{8}$

3.  $\frac{2}{9} + \frac{1}{3}$

4.  $\frac{5}{12} + \frac{3}{4}$

5.  $\frac{7}{9} + \frac{7}{18}$

6.  $\frac{2}{7} + \frac{1}{2}$

7.  $\frac{2}{5} + \frac{4}{5}$

8.  $\frac{3}{4} + \frac{9}{14}$

9.  $\frac{8}{9} + \frac{2}{3}$

Divide.

1.  $6\frac{1}{2} + 3\frac{9}{10}$

2.  $5\frac{5}{6} + 5\frac{1}{4}$

3.  $3\frac{1}{3} + 2\frac{4}{9}$

4.  $5\frac{5}{8} + 3\frac{3}{5}$

5.  $4\frac{1}{8} + 4\frac{7}{12}$

6.  $4\frac{7}{12} + 4\frac{1}{8}$

7.  $3\frac{3}{4} + 2\frac{11}{12}$

8.  $4\frac{6}{7} + 5\frac{8}{14}$

$$6\frac{1}{2} + 3\frac{9}{10}$$

$$\frac{13}{2} \div \frac{39}{10}$$

$$\frac{13}{2} \times \frac{10}{39} = \frac{130}{78}$$

$$\begin{array}{r} 1 \\ 18 \overline{)130} \\ \underline{-78} \\ 52 \end{array}$$

$$1\frac{52}{78}$$

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

$$\begin{array}{r} 2 \overline{)52,18} \\ 13 \overline{)26,39} \\ \underline{\phantom{26,}39} \\ 2,3 \end{array}$$



