

3.10

Dividing a Fraction by Another

• Example 1

$$\frac{5}{8} \div \frac{3}{5} = \frac{5}{8} \times \frac{5}{3} = \frac{5 \times 5}{8 \times 3} = \frac{25}{24} = 1\frac{1}{24}$$

Write the quotient as a mixed number if necessary.

• • • CHECK YOURSELF 1

Divide.

$$\frac{5}{6} \div \frac{3}{8}$$

• Example 2

$$\begin{aligned} \frac{3}{5} \div \frac{6}{7} &= \frac{3}{5} \times \frac{7}{6} \\ &= \frac{\overset{1}{\cancel{3}} \times 7}{5 \times \underset{2}{\cancel{6}}} = \frac{7}{10} \end{aligned}$$

• • • CHECK YOURSELF 2

Divide.

$$\frac{4}{9} \div \frac{8}{15}$$

• • • CHECK YOURSELF ANSWERS

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

2. $\frac{4}{9} \div \frac{8}{15} = \frac{4}{9} \times \frac{15}{8} = \frac{\overset{1}{\cancel{4}} \times \overset{5}{\cancel{15}}}{\underset{3}{\cancel{9}} \times \underset{2}{\cancel{8}}} = \frac{5}{6}$.

3.10 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____
2. _____
3. _____
4. _____
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17. _____
18. _____

Divide. Write each result in simplest form.

1. $\frac{1}{5} \div \frac{3}{4}$

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

3. $\frac{2}{5} \div \frac{3}{4}$

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

5. $\frac{8}{9} \div \frac{4}{3}$

6. $\frac{5}{9} \div \frac{8}{11}$

7. $\frac{7}{10} \div \frac{5}{9}$

8. $\frac{8}{9} \div \frac{11}{15}$

9. $\frac{8}{15} \div \frac{2}{5}$

10. $\frac{5}{27} \div \frac{15}{54}$

11. $\frac{5}{27} \div \frac{25}{36}$

12. $\frac{9}{28} \div \frac{27}{35}$

13. $\frac{4}{9} \div \frac{5}{7}$

14. $\frac{3}{8} \div \frac{5}{7}$

15. $\frac{7}{8} \div \frac{3}{4}$

16. $\frac{3}{10} \div \frac{9}{20}$

17. $\frac{9}{10} \div \frac{6}{25}$

18. $\frac{7}{8} \div \frac{21}{40}$