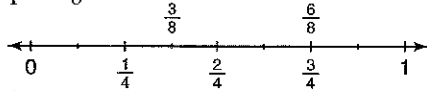## Check

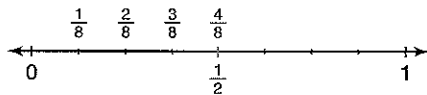**4.** Write the reciprocal of each fraction.

a) $\frac{5}{9}$ b) $\frac{3}{7}$ c) $\frac{7}{8}$ d) $\frac{14}{15}$

5. Use a copy of each number line to illustrate each quotient.
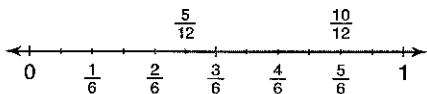
a) $\frac{3}{4} \div \frac{3}{8}$

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

c) $\frac{5}{6} \div \frac{5}{12}$

6. Divide: $\frac{3}{5} \div \frac{9}{10}$

a) What is the reciprocal of $\frac{9}{10}$?
b) Use multiplication. Simplify first.
c) Estimate the quotient.
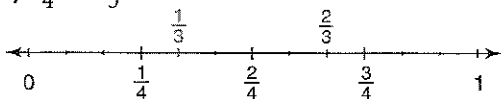d) Is the quotient reasonable? How do you know?

Apply

7. Use a copy of each number line to illustrate each quotient.
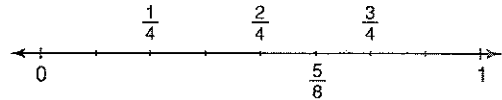
a) $\frac{5}{6} \div \frac{1}{3}$

b) $\frac{3}{4} \div \frac{1}{3}$

c) $\frac{7}{9} \div \frac{1}{3}$

d) $\frac{5}{8} \div \frac{1}{4}$

8. Find each quotient.

a) $\frac{7}{10} \div \frac{3}{10}$ b) $\frac{5}{9} \div \frac{2}{9}$
c) $\frac{3}{5} \div \frac{2}{5}$ d) $\frac{4}{5} \div \frac{2}{5}$

9. Use multiplication to find each quotient.

a) $\frac{8}{5} \div \frac{3}{4}$ b) $\frac{9}{10} \div \frac{5}{3}$
c) $\frac{7}{2} \div \frac{4}{3}$ d) $\frac{1}{2} \div \frac{7}{6}$

10. Use common denominators to find each quotient.

a) $\frac{7}{12} \div \frac{1}{4}$ b) $\frac{3}{5} \div \frac{11}{10}$
c) $\frac{5}{2} \div \frac{1}{3}$ d) $\frac{5}{6} \div \frac{9}{8}$

11. Divide. Estimate to check each quotient is reasonable.

a) $\frac{5}{3} \div \frac{3}{5}$ b) $\frac{4}{9} \div \frac{4}{9}$ c) $\frac{1}{6} \div \frac{5}{2}$

12. Suppose you have $\frac{11}{12}$ of a cake. How many servings can you make of each size?

a) $\frac{1}{4}$ of the cake   b) $\frac{1}{3}$ of the cake
c) $\frac{1}{6}$ of the cake   d) $\frac{1}{2}$ of the cake

13. **a)** Find each quotient.

i) $\frac{3}{4} \div \frac{5}{8}$ ii) $\frac{5}{8} \div \frac{3}{4}$

iii) $\frac{7}{12} \div \frac{2}{5}$ iv) $\frac{2}{5} \div \frac{7}{12}$

v) $\frac{5}{3} \div \frac{4}{5}$ vi) $\frac{4}{5} \div \frac{5}{3}$

b) In part a, what patterns do you see in the division statements and their quotients? Write two more pairs of division statements that follow the same pattern.

14. As a busboy in a restaurant, Amiel takes $\frac{1}{12}$ h to clear and reset a table. How many tables can Amiel clear in $\frac{2}{3}$ h? Estimate to check the solution is reasonable.

15. Divide. Estimate to check each quotient is reasonable.

a) $\frac{27}{28} \div \frac{9}{14}$ b) $\frac{15}{22} \div \frac{3}{11}$

c) $\frac{32}{51} \div \frac{8}{17}$ d) $\frac{57}{69} \div \frac{19}{115}$

16. To conduct a science experiment, each pair of students requires $\frac{1}{16}$ cup of vinegar. The science teacher has $\frac{3}{4}$ cup of vinegar. How many pairs of students can conduct the experiment?

17. Assessment Focus

a) Copy the boxes below. Write the digits 2, 3, 4, and 5 in the boxes to make as many different division statements as you can.

$$\frac{\square}{\square} \div \frac{\square}{\square}$$

b) Which division statement in part a has the greatest quotient? The least quotient? How do you know? Show your work.

18. Tahoe used the expression $\frac{7}{8} \div \frac{1}{4}$ to solve a word problem. What might the word problem be? Solve the problem. Estimate to check the solution is reasonable.

19. Take It Further Copy each division equation. Replace each $\square$ with a fraction to make each equation true. Explain the strategy you used.

a) $\frac{2}{3} \div \square = \frac{8}{9}$ b) $\frac{3}{11} \div \square = \frac{12}{55}$

c) $\frac{1}{4} \div \square = \frac{9}{20}$ d) $\frac{4}{5} \div \square = \frac{28}{45}$

20. Take It Further Write as many division statements as you can that have a quotient between $\frac{1}{2}$ and 1. Explain the strategy you used.

Reflect

Explain how your knowledge of common denominators can help you divide two fractions. Include an example in your explanation.