LESSON **Practice A**

5-3 *Dividing Fractions and Mixed Numbers*

Find the reciprocal.

1. $\dfrac{1}{2}$

2. $\dfrac{2}{3}$

3. $\dfrac{1}{5}$

_____

_____

_____

4. $\dfrac{1}{3}$

5. $\dfrac{3}{5}$

6. $\dfrac{1}{7}$

_____

_____

_____

7. $\dfrac{2}{5}$

8. $\dfrac{3}{7}$

9. $\dfrac{4}{5}$

_____

_____

_____

Divide. Write each answer in simplest form.

10. $\dfrac{2}{3} \div 2$

11. $\dfrac{1}{2} \div \dfrac{3}{4}$

12. $\dfrac{5}{6} \div \dfrac{1}{4}$

$\dfrac{2}{3} \bullet$ _____

$\dfrac{1}{2} \bullet$ _____

$\dfrac{5}{6} \bullet$ _____

_____

_____

_____

13. $\dfrac{3}{5} \div \dfrac{1}{5}$

14. $\dfrac{7}{9} \div 3$

15. $1\dfrac{1}{2} \div \dfrac{1}{2}$

$\dfrac{3}{5} \bullet$ _____

$\dfrac{7}{9} \bullet$ _____

$1\dfrac{1}{2} \bullet$ _____

_____

_____

_____

16. Stella has 6 pounds of chocolate. She will use $\dfrac{2}{3}$ pound of the chocolate to make one cake. How many cakes can she make?

_____

17. Todd has $\dfrac{8}{9}$ pound of clay. He will use $\dfrac{1}{3}$ pound to make each action figure. How many action figures can he make?

_____

18. Dylan gives his two guinea pigs a total of $\dfrac{3}{4}$ cup of food every day. If each guinea pig gets the same amount of food, how much do they each get each day?

_____

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Puzzles, Twisters & Teasers
All Mixed Up!

Rami was carrying a set of cards, but he tripped. The cards fell on the floor and are all mixed up. Help Rami put them in order by solving each problem.

Once you have solved the problems, place the cards in order from least to greatest. When in order, the letters will spell out a message!

B	**O**	**J**	**O**
$6 \cdot 2\frac{2}{3}$	$3\frac{1}{4} \cdot 3\frac{2}{5}$	$2\frac{3}{4} \cdot 3\frac{2}{3}$	$1\frac{1}{2} \cdot 4\frac{5}{6}$

D	**O**	**G**
$5\frac{1}{2} \cdot 1\frac{2}{5}$	$\frac{4}{5} \cdot 3\frac{5}{6}$	$\frac{5}{7} \cdot \frac{1}{8}$

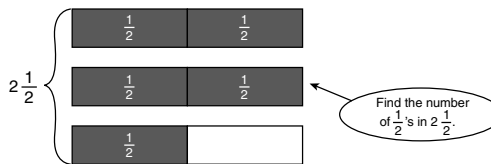The message is… **GOOD JOB** .

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Exploration Recording Sheet
Dividing Fractions and Mixed Numbers
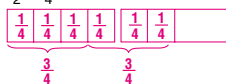
The model shows the quotient of $2\frac{1}{2} \div \frac{1}{2}$.

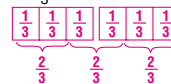Find the number of $\frac{1}{2}$'s in $2\frac{1}{2}$.

There are 5 halves in $2\frac{1}{2}$, so $2\frac{1}{2} \div \frac{1}{2} = 5$.

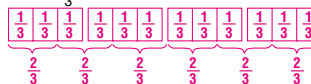**Draw a model to solve each division problem.**
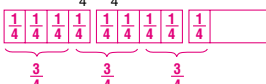
1. $1\frac{1}{2} \div \frac{3}{4} = 2$

2. $2 \div \frac{2}{3} = 3$

3. $4 \div \frac{2}{3} = 6$

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

Think and Discuss

5. **Describe** how to model fraction division by using fraction bars.

   Possible answer: Using the denominator of the divisor as the unit of fraction bars, represent the dividend. Then put the bars into groups indicated by the numerator of the divisor.

6. **Explain** why $3 \div \frac{3}{4} = 4$.

   Possible answer: When you divide $3 \div \frac{3}{4}$, each "1" is divided into fourths, which gives a total of 12 fourths. There are 4 groups of $\frac{3}{4}$.

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Practice A
Dividing Fractions and Mixed Numbers

Find the reciprocal.

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

2. $\frac{2}{3}$ **$\frac{3}{2}$**

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

4. $\frac{1}{3}$ **3**

5. $\frac{3}{5}$ **$\frac{5}{3}$**

6. $\frac{1}{7}$ **7**

7. $\frac{2}{5}$ **$\frac{5}{2}$**

8. $\frac{3}{7}$ **$\frac{7}{3}$**

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

Divide. Write each answer in simplest form.

10. $\frac{2}{3} \div 2$

   $\frac{2}{3} \cdot \frac{1}{2}$

   $\frac{1}{3}$

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

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

   $\frac{2}{3}$

12. $\frac{5}{6} \div \frac{1}{4}$

   $\frac{5}{6} \cdot \frac{4}{1}$

   $3\frac{1}{3}$

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

   $\frac{3}{5} \cdot \frac{5}{1}$

   3

14. $\frac{7}{9} \div 3$

   $\frac{7}{9} \cdot \frac{1}{3}$

   $\frac{7}{27}$

15. $1\frac{1}{2} \div \frac{1}{2}$

   $1\frac{1}{2} \cdot \frac{2}{1}$

   3

16. Stella has 6 pounds of chocolate. She will use $\frac{2}{3}$ pound of the chocolate to make one cake. How many cakes can she make?   **9 cakes**

17. Todd has $\frac{8}{9}$ pound of clay. He will use $\frac{1}{3}$ pound to make each action figure. How many action figures can he make?   **2 action figures**

18. Dylan gives his two guinea pigs a total of $\frac{3}{4}$ cup of food every day. If each guinea pig gets the same amount of food, how much do they each get each day?   **$\frac{3}{8}$ cup of food**

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Practice B
Dividing Fractions and Mixed Numbers

Find the reciprocal.

1. $\frac{5}{7}$ **$\frac{7}{5}$**

2. $\frac{9}{8}$ **$\frac{8}{9}$**

3. $\frac{3}{5}$ **$\frac{5}{3}$**

4. $\frac{1}{10}$ **10**

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

6. $\frac{13}{14}$ **$\frac{14}{13}$**

7. $1\frac{1}{3}$ **$\frac{3}{4}$**

8. $2\frac{4}{5}$ **$\frac{5}{14}$**

9. $3\frac{1}{6}$ **$\frac{6}{19}$**

Divide. Write each answer in simplest form.

10. $\frac{5}{6} \div 5$ **$\frac{1}{6}$**

11. $2\frac{3}{4} \div 1\frac{4}{4}$ **$1\frac{3}{4}$**

12. $\frac{7}{8} \div \frac{2}{3}$ **$1\frac{5}{16}$**

13. $3\frac{1}{4} \div 2\frac{3}{4}$ **$1\frac{2}{11}$**

14. $\frac{9}{10} \div 3$ **$\frac{3}{10}$**

15. $\frac{3}{4} \div 9$ **$\frac{1}{12}$**

16. $2\frac{6}{9} \div \frac{6}{7}$ **$3\frac{1}{9}$**

17. $\frac{5}{6} \div 2\frac{3}{10}$ **$\frac{25}{69}$**

18. $2\frac{1}{8} \div 3\frac{1}{4}$ **$\frac{17}{26}$**

19. The rope in the school gymnasium is $10\frac{1}{2}$ feet long. To make it easier to climb, the gym teacher tied a knot in the rope every $\frac{3}{4}$ foot. How many knots are in the rope?   **14 knots**

20. Mr. Fulton bought $12\frac{1}{2}$ pounds of ground beef for the cookout. He plans on using $\frac{1}{4}$ pound of beef for each hamburger. How many hamburgers can he make?   **50 hamburgers**

21. Mrs. Marks has $9\frac{1}{4}$ ounces of fertilizer for her plants. She plans on using $\frac{3}{4}$ ounce of fertilizer for each plant. How many plants can she fertilizer?   **12 plants**

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