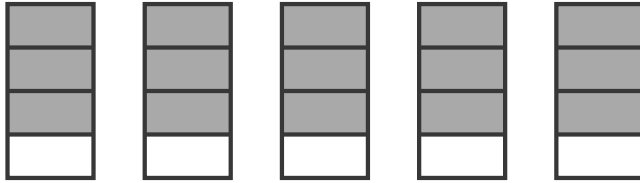


# Additional Practice 8-1

## Multiply a Fraction by a Whole Number

### Another Look!

Juan needs  $\frac{3}{4}$  yard of fabric to make a pillowcase. How many yards of fabric will Juan need to sew 5 pillowcases?



Multiply the whole number by the numerator.

$$5 \times 3 = 15$$

Write the product over the denominator.

$$\frac{15}{4} = 3\frac{3}{4}$$

Juan will need  $3\frac{3}{4}$  yards of fabric.

Remember: You can check your answer using repeated addition.



**Leveled Practice** In 1–11, find each product. Use models to help.

$$1. 72 \times \frac{5}{12} = \boxed{72} \times 5 \times \frac{1}{12} = \frac{\boxed{360} \times 1}{12} = \frac{360}{12} = \boxed{30}$$

$$2. 35 \times \frac{2}{5} = \boxed{35} \times 2 \times \frac{1}{5} = \frac{\boxed{70} \times 1}{5} = \frac{70}{5} = \boxed{14}$$

$$3. 12 \times \frac{3}{4} = \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} + \frac{\boxed{3}}{\boxed{4}} = \frac{\boxed{36}}{4} = \boxed{9}$$

$$4. 13 \times \frac{2}{3} = \frac{26}{3} \text{ or } 8\frac{2}{3}$$

$$5. 70 \times \frac{9}{10} = 63$$

$$6. 81 \times \frac{2}{9} = 18$$

$$7. 57 \times \frac{2}{3} = 38$$

$$8. 600 \times \frac{3}{10} = 180$$

$$9. 16 \times \frac{3}{5} = \frac{48}{5} \text{ or } 9\frac{3}{5}$$

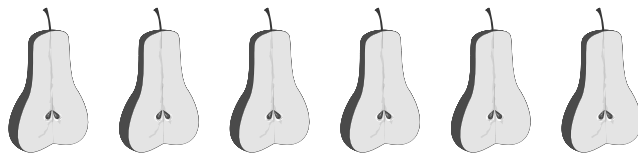
$$10. 400 \times \frac{1}{4} = 100$$

$$11. 48 \times \frac{5}{6} = 40$$



12. Look at the picture. Write and solve an equation to model the picture. Show your answer as a multiplication equation with  $\frac{1}{2}$  as a factor.

$$6 \times \frac{1}{2} = 3$$



13. **Higher Order Thinking** Explain how you would find  $45 \times \frac{7}{9}$  mentally.

**Sample answer:** I know  $45 \times \frac{1}{9}$  is 5. Then multiply 5 by 7 to get 35.

14. **Construct Arguments** Do you think the difference  $2.99 - 0.01$  is greater than 3 or less than 3? Explain.

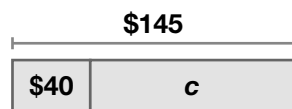
**Less than 3; Sample explanation:** 0.01 is being subtracted from a number less than 3 so the difference is less than 3.

15. Ben runs  $\frac{3}{4}$  mile each day. How many miles does Ben run in 12 days? **9 miles**

16. Write a multiplication expression that shows  $10^5$ .

**Sample answer:**  
 $10 \times 10 \times 10 \times 10 \times 10$

17. **Algebra** Tina had \$145. She spent \$40 on fruit at the farmer's market. Solve the equation  $40 + c = 145$  to find the amount Tina has left.



$$\text{\$105; } 40 + 105 = 145$$

18. Hippos eat a lot of food. How much food do 28 hippos eat in a week?



**About 14 tons**

Hippos eat about  $\frac{1}{2}$  ton of food in a week.

### Assessment Practice

19. Select all equations that would be made true with the number 34.

- ☒ ☐  $\times \frac{1}{2} = 17$   
☒  $51 \times \frac{2}{3} = \square$   
☐ ☐  $\times \frac{3}{8} = 12$   
☐  $300 \times \frac{1}{9} = \square$

20. Select all equations that would be made true with the fraction  $\frac{2}{9}$ .

- ☒  $81 \times \square = 18$   
☒  $900 \times \square = 200$   
☒  $72 \times \square = 16$   
☒  $450 \times \square = 100$