



3-4

AGES 8-10

# Multiplication & Division



Online Curriculum Try It Today



**SKILL AREAS INCLUDE**

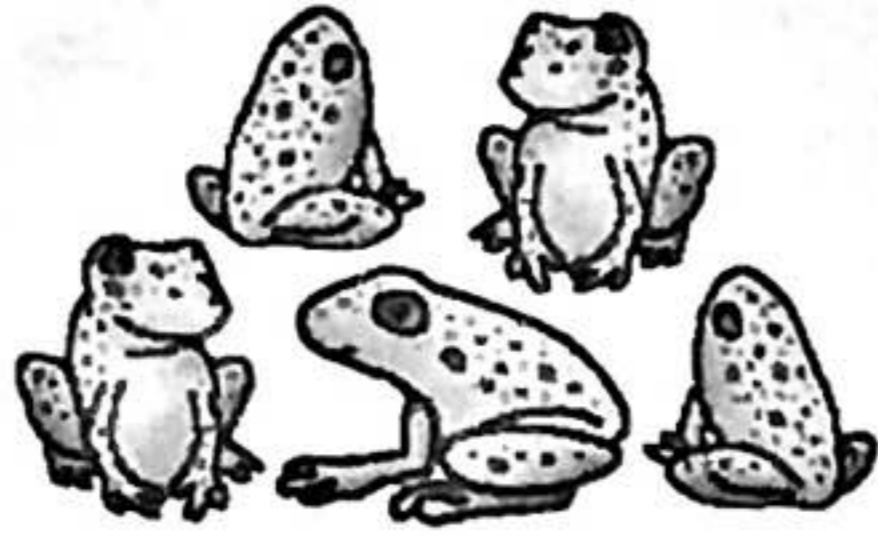
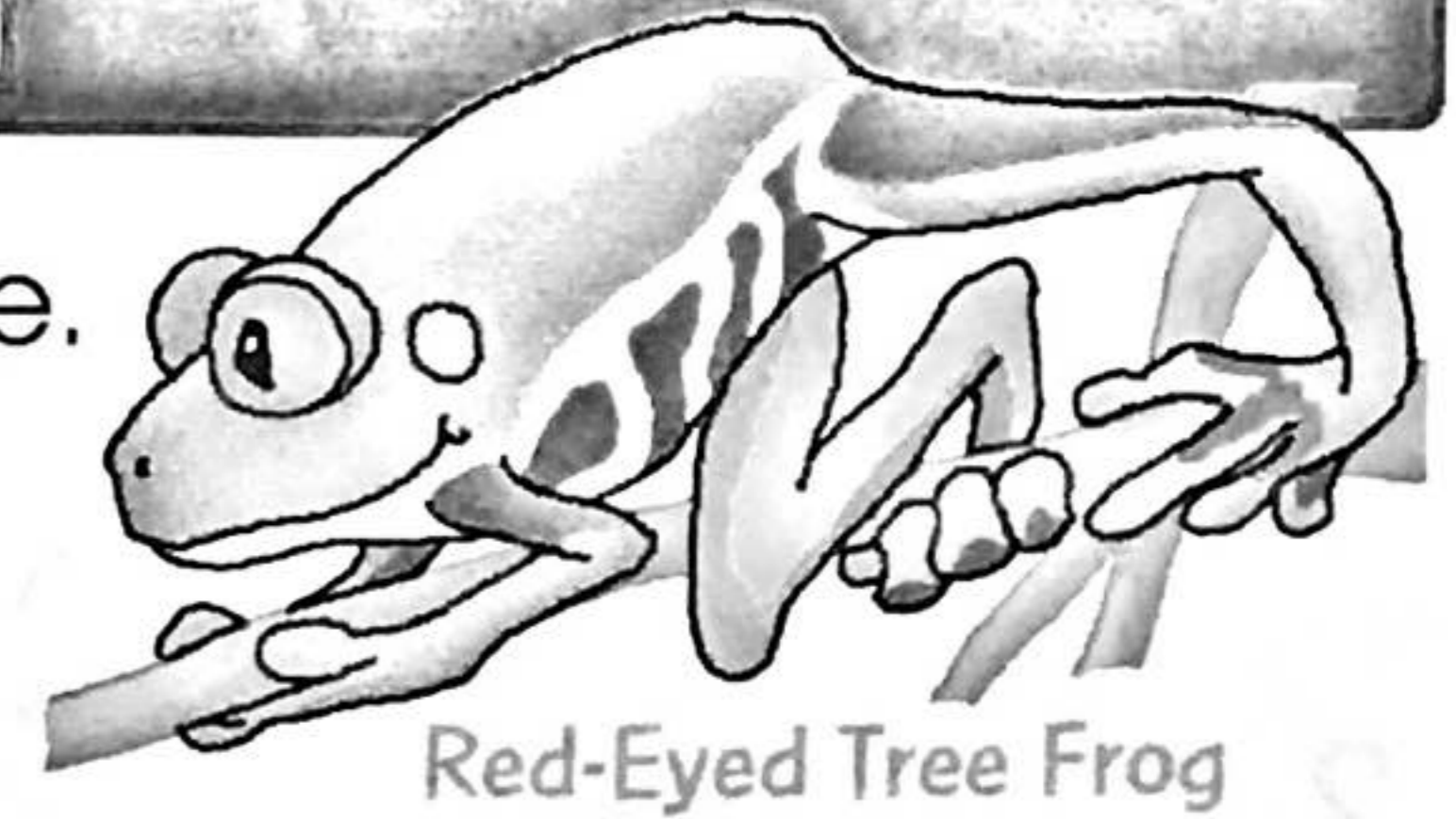
- ★ Multiplication
- ★ Word Problems

- ★ Estimation
- ★ Division
- ★ And More!

Follows NCTM & COMMON CORE Standards

# Learning about Multiplication

Multiplication is a short way to add groups of equal size.



Addition Sentence:  $5 + 5 + 5 = 15$



Meaning:  $3$  groups of  $5 = 15$

Multiplication Sentence:  $3 \times 5 = 15$

Write addition and multiplication sentences to tell how many there are.

1.

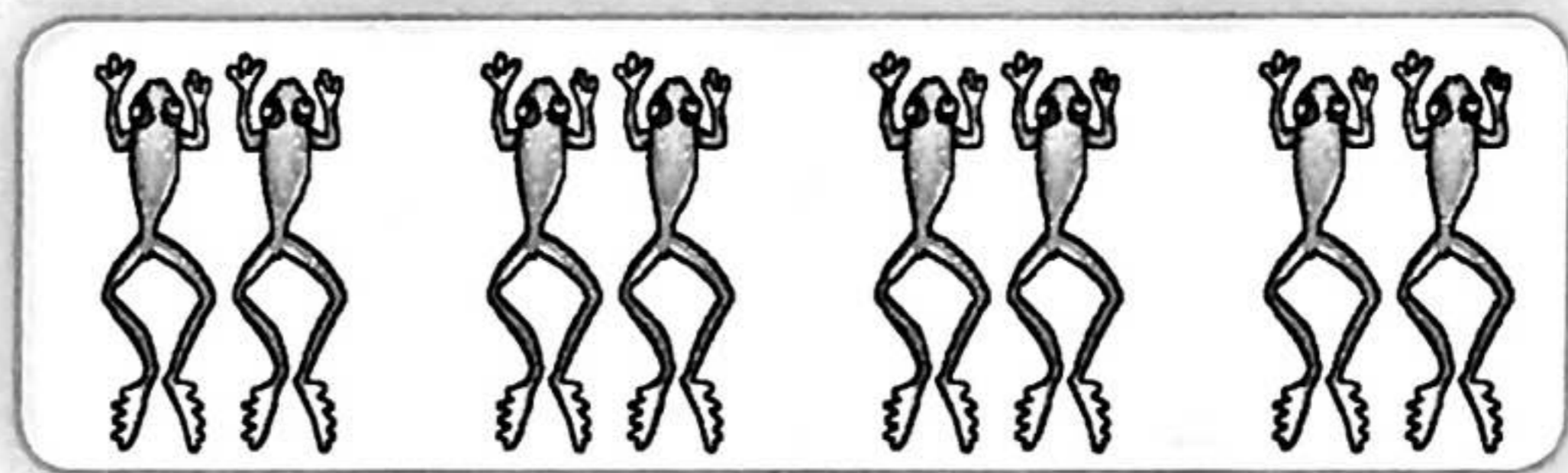


$\underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad}$  groups of  $\underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

2.



$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad}$  groups of  $\underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

3.



$\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad}$  groups of  $\underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

4.



$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$

$\underline{\quad}$  groups of  $\underline{\quad} = \underline{\quad}$

$\underline{\quad} \times \underline{\quad} = \underline{\quad}$

# Learning about Multiplication

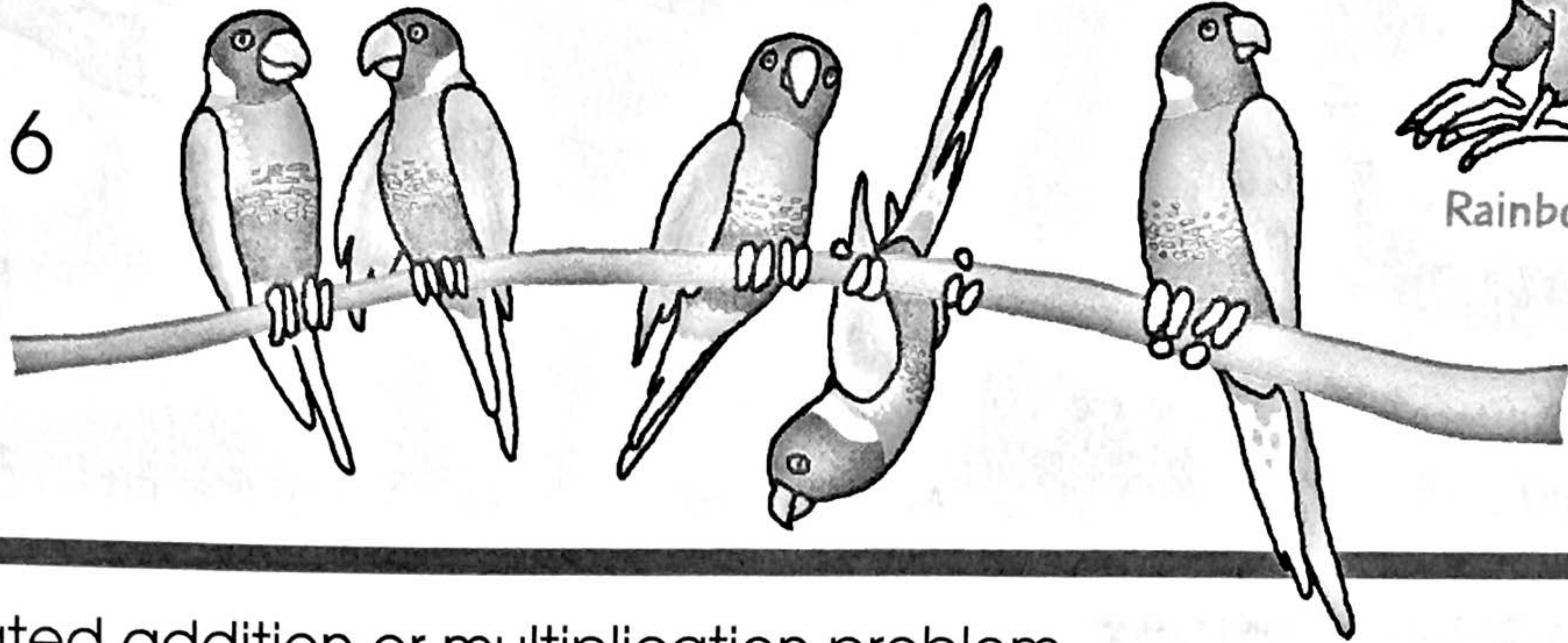
Multiplication is the same as repeated addition.



Rainbow Lorikeets

$$2 + 2 + 2 = 6$$

$$3 \times 2 = 6$$



Write the related addition or multiplication problem.

1.  $4 \times 3 = 12$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

2.  $3 + 3 + 3 + 3 + 3 = 15$

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

3.  $5 \times 9 = 45$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

4.  $6 + 6 + 6 + 6 + 6 + 6 = 36$

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

5.  $3 \times 3 = 9$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

6.  $8 + 8 = 16$

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

7.  $3 \times 7 = 21$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

8.  $7 + 7 + 7 + 7 = 28$

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

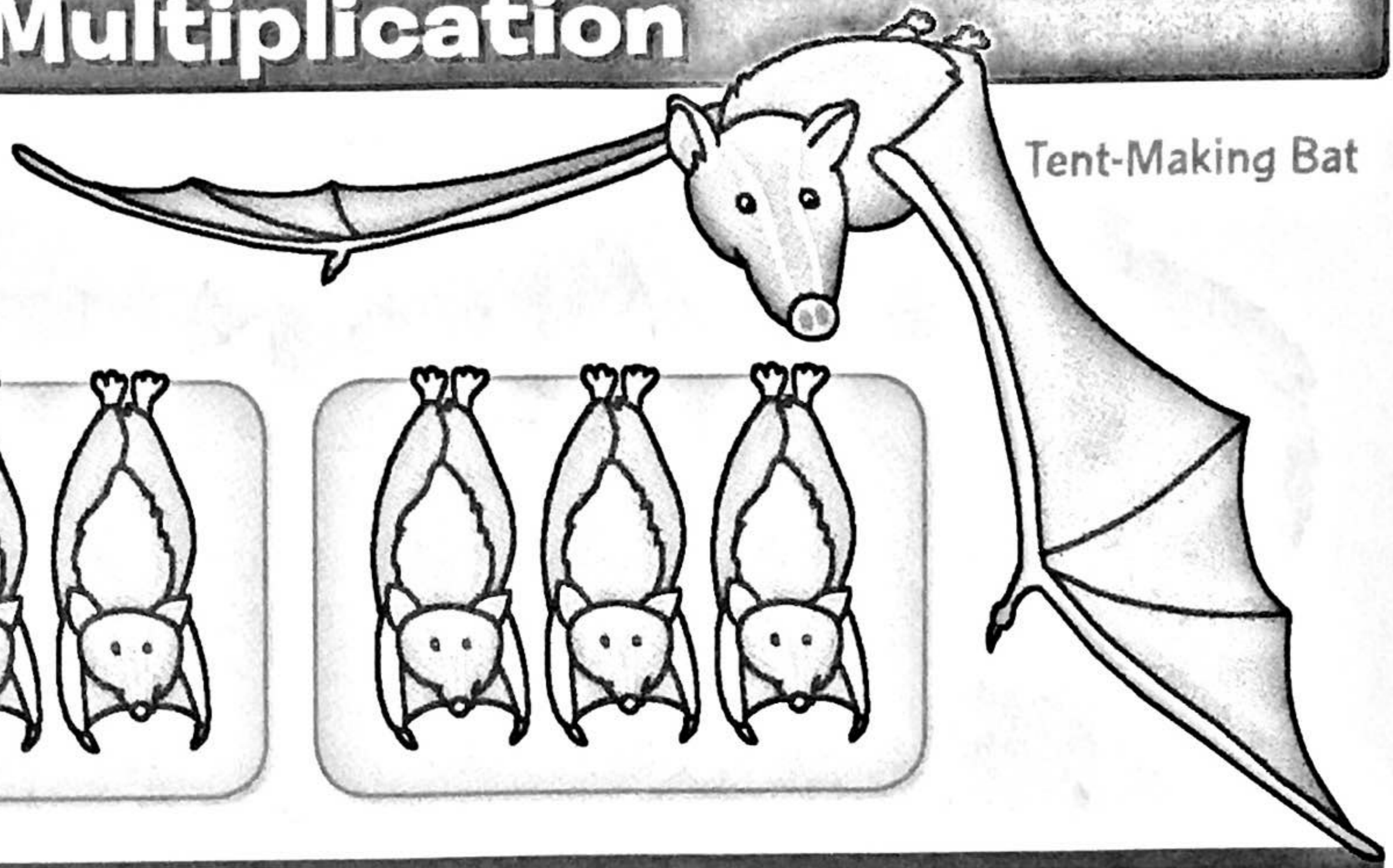
9.  $5 \times 7 = 35$

\_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

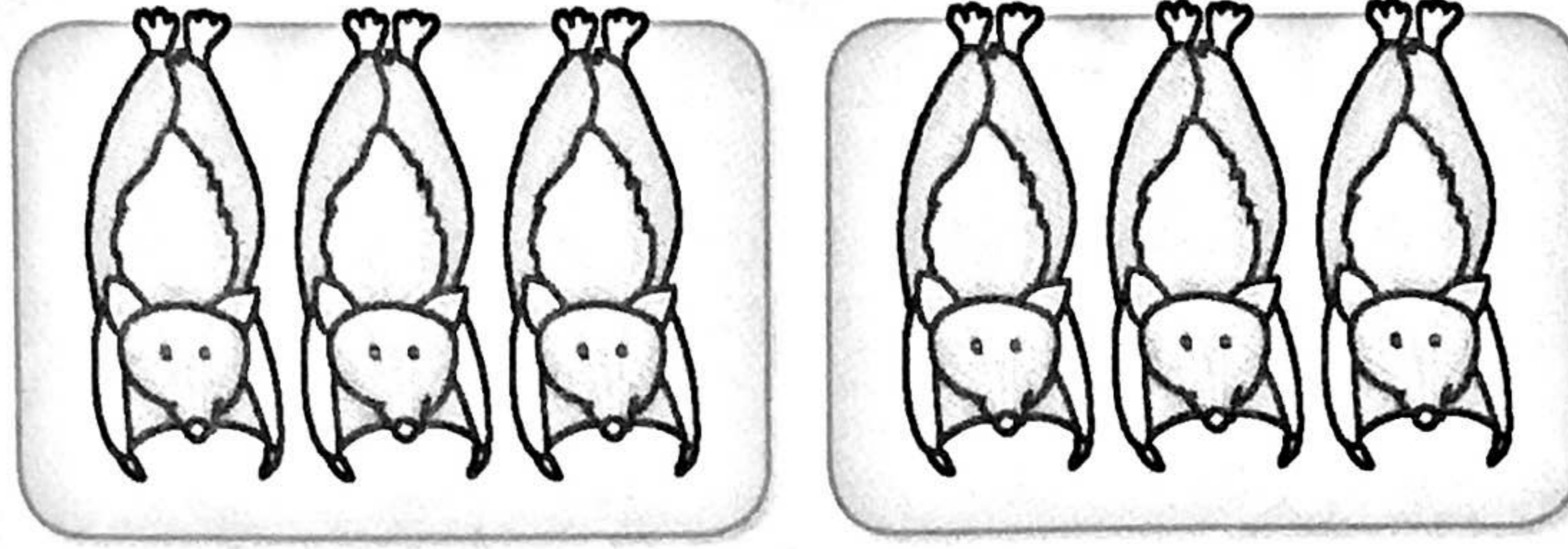
10.  $9 + 9 + 9 + 9 + 9 = 45$

\_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

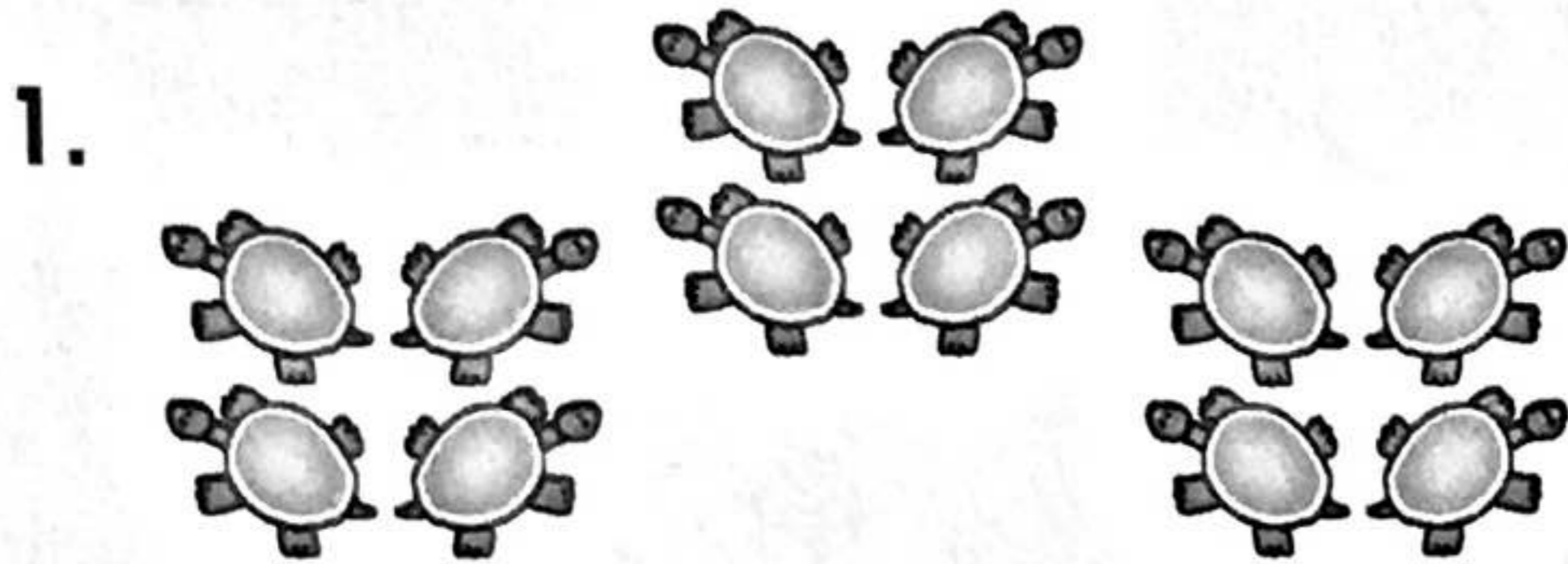
# Learning about Multiplication



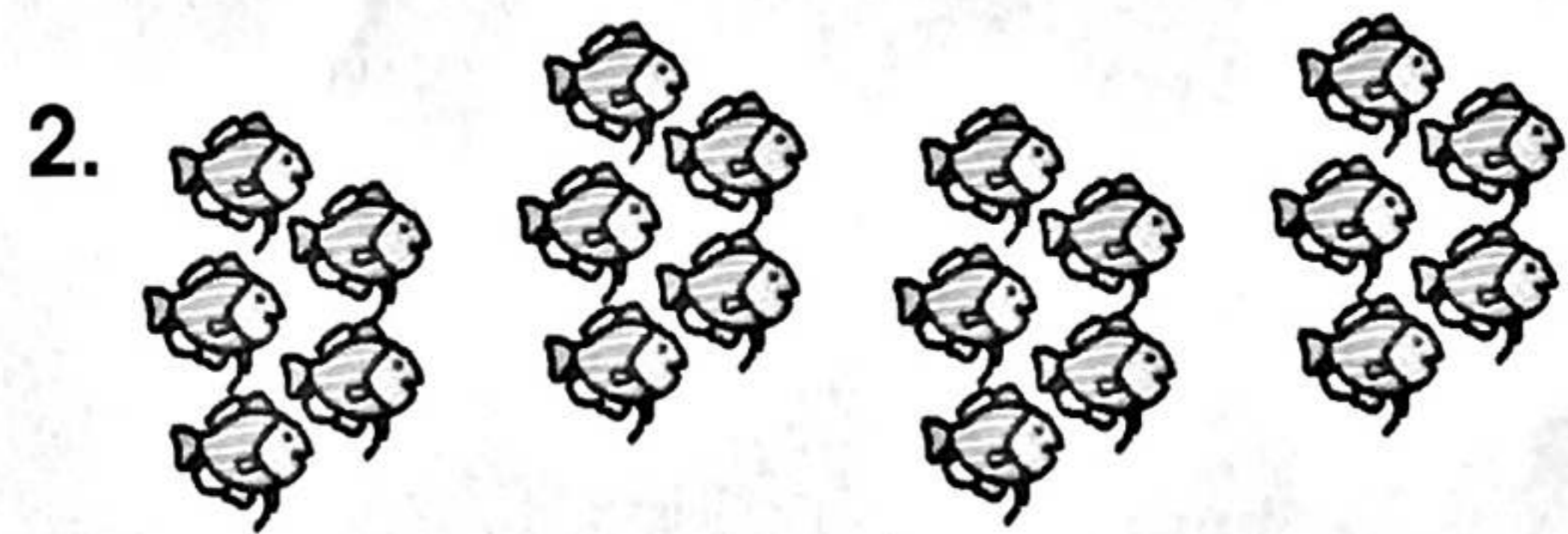
2 groups  
3 in each group  
 $2 \times 3 = 6$



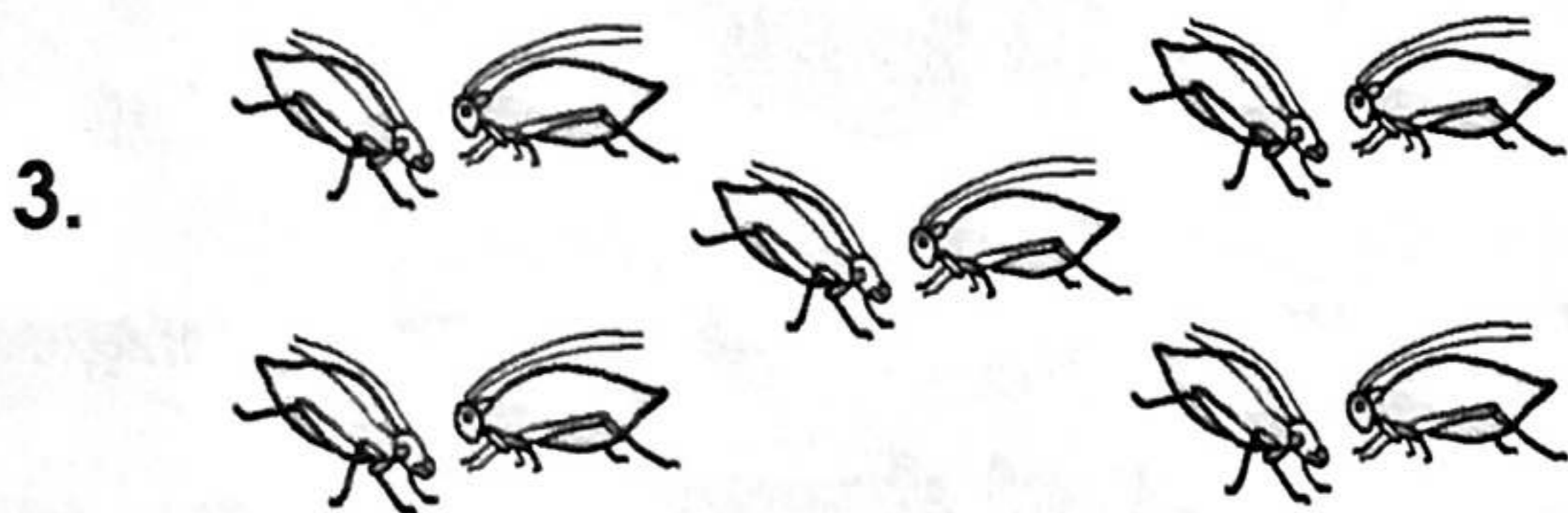
Write a multiplication sentence.



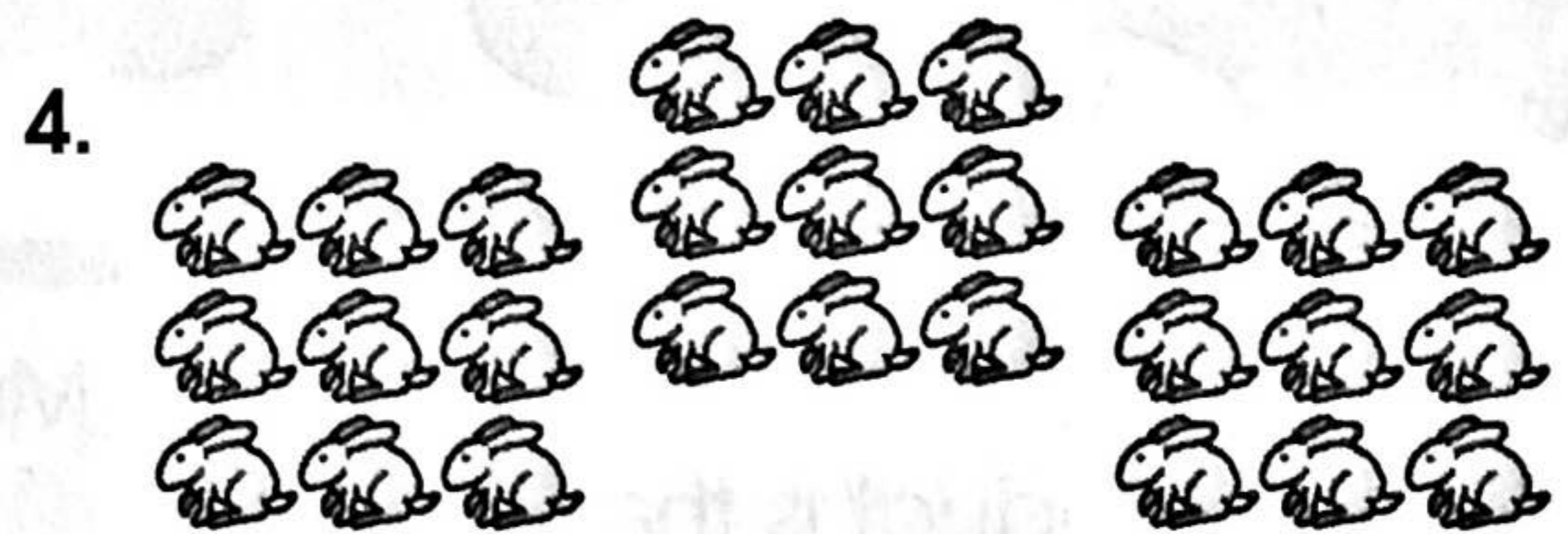
\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_



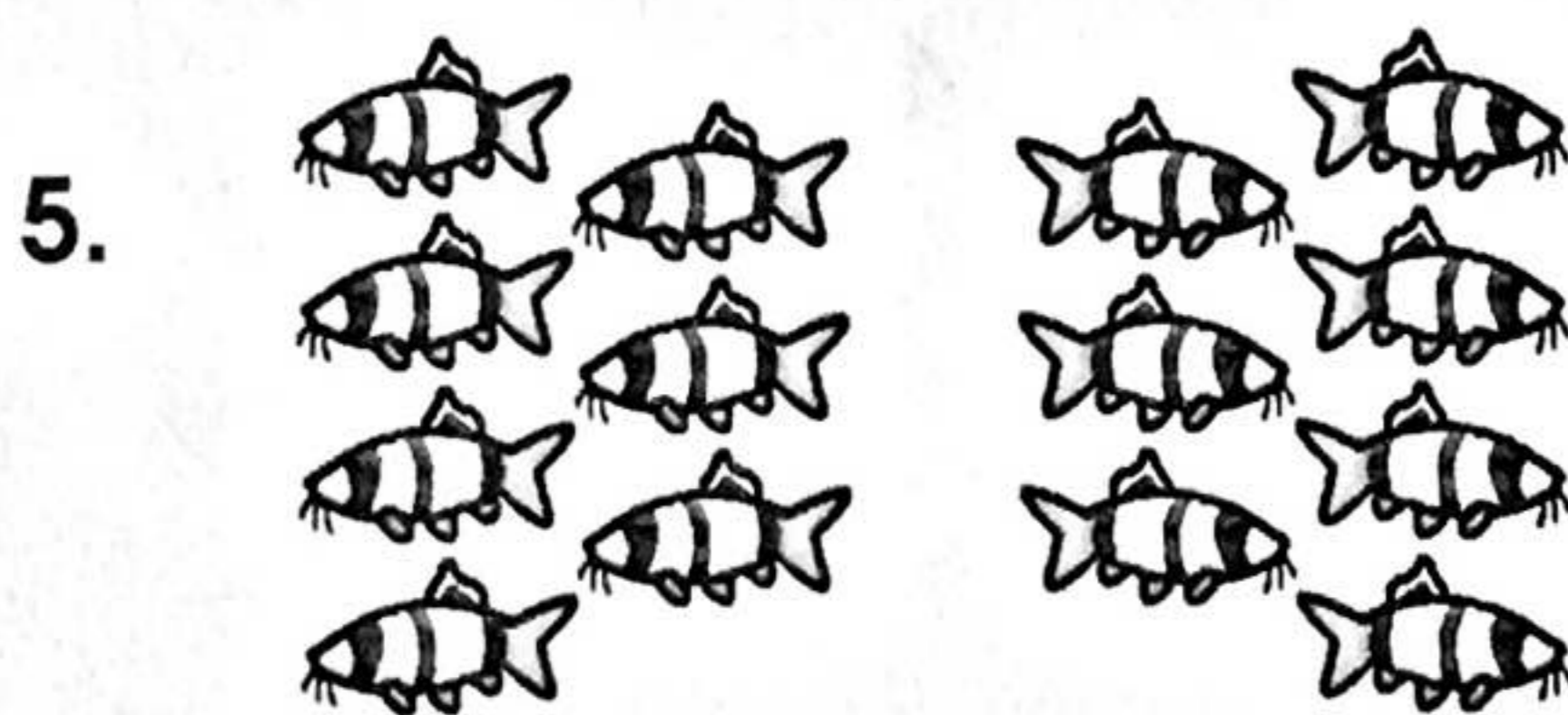
\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_



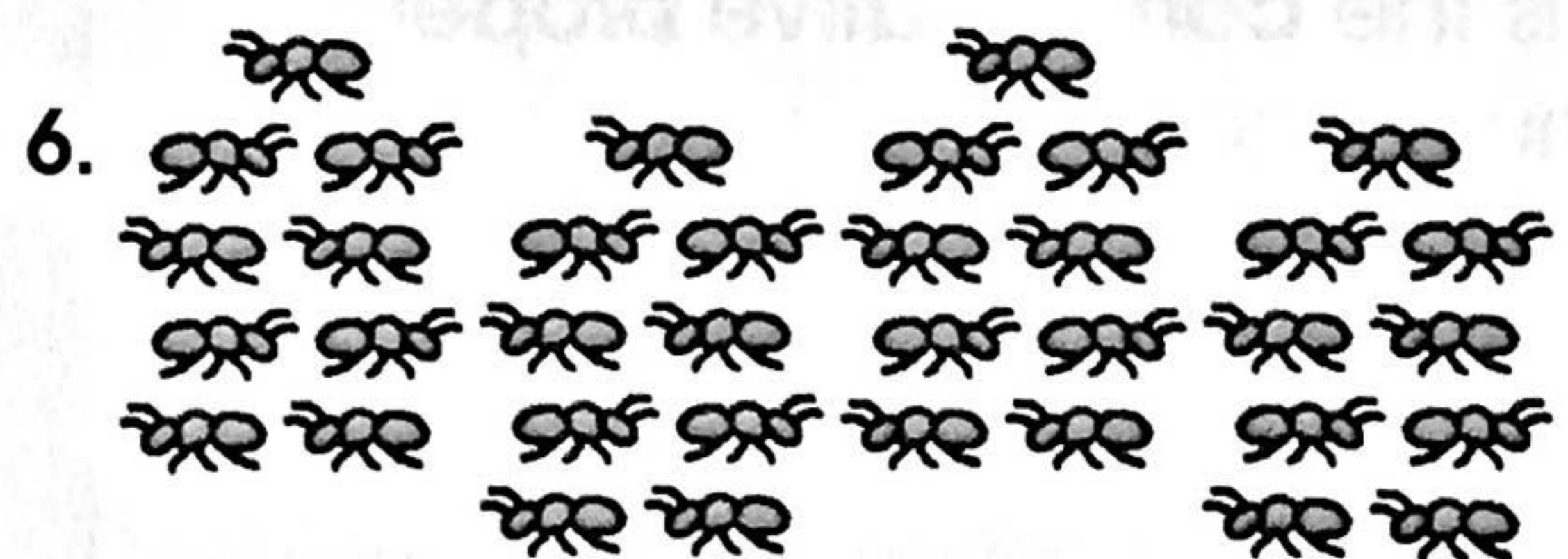
\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_



\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

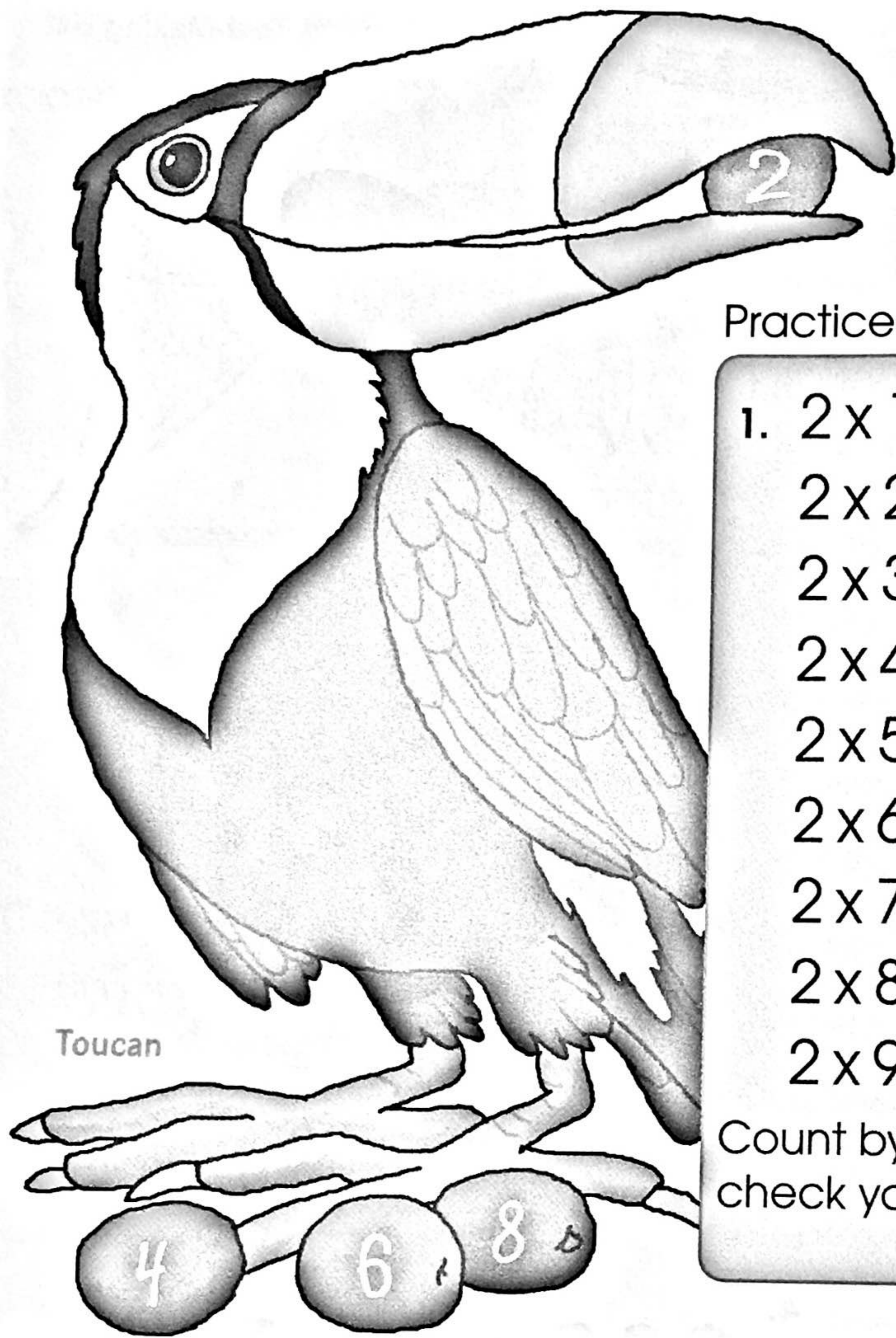


\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

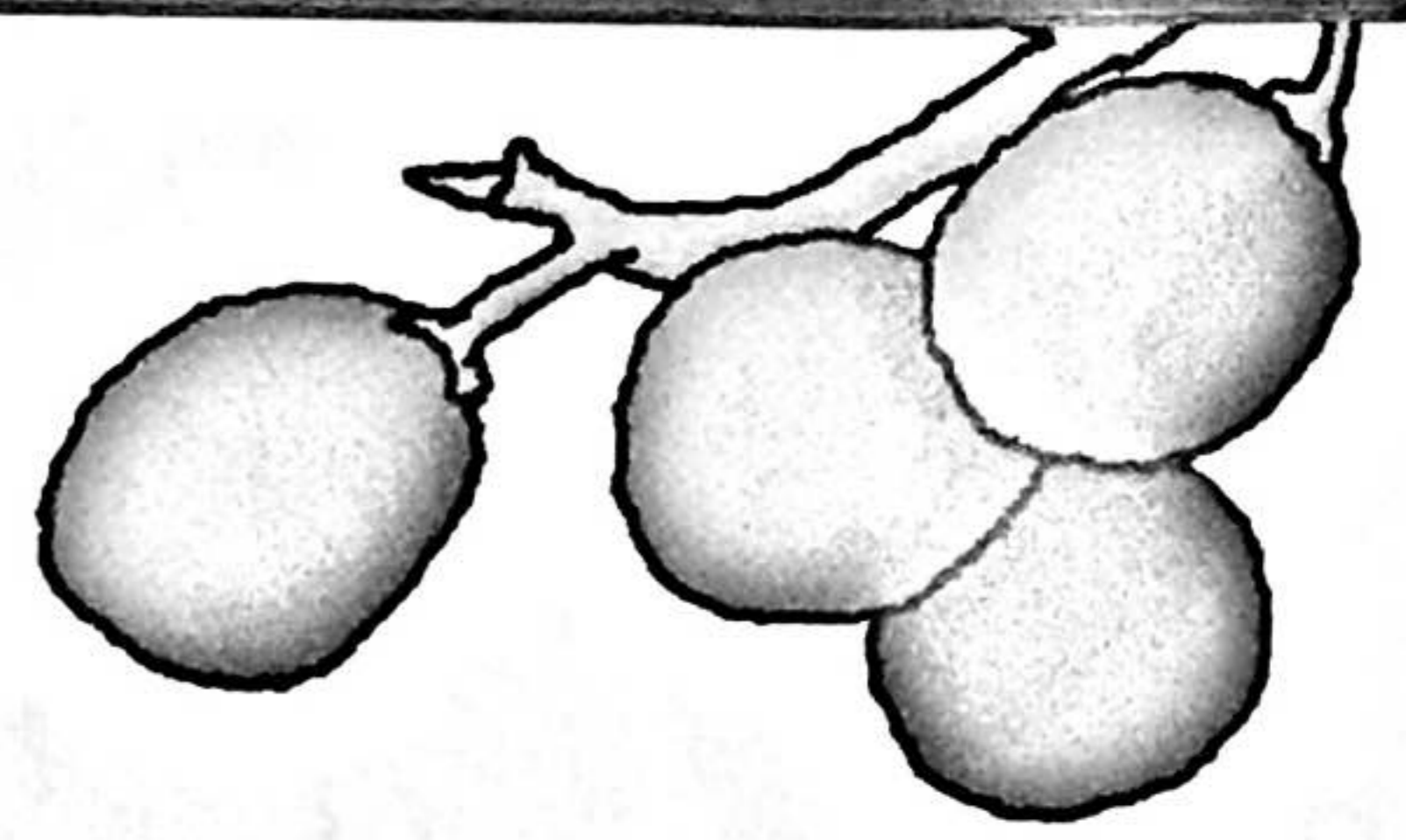


\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

# Multiplication Facts: 2s and 3s



Toucan



Practice the facts.

1.  $2 \times 1 = \underline{\quad}$
- $2 \times 2 = \underline{\quad}$
- $2 \times 3 = \underline{\quad}$
- $2 \times 4 = \underline{\quad}$
- $2 \times 5 = \underline{\quad}$
- $2 \times 6 = \underline{\quad}$
- $2 \times 7 = \underline{\quad}$
- $2 \times 8 = \underline{\quad}$
- $2 \times 9 = \underline{\quad}$

Count by 2s to check your answers.

2.  $3 \times 1 = \underline{\quad}$
- $3 \times 2 = \underline{\quad}$
- $3 \times 3 = \underline{\quad}$
- $3 \times 4 = \underline{\quad}$
- $3 \times 5 = \underline{\quad}$
- $3 \times 6 = \underline{\quad}$
- $3 \times 7 = \underline{\quad}$
- $3 \times 8 = \underline{\quad}$
- $3 \times 9 = \underline{\quad}$

Count by 3s to check your answers.

If you change the order of the factors, the product is the same.

2 groups of 3	3 groups of 2
$2 \times 3 = 6$	$3 \times 2 = 6$
$\uparrow \quad \uparrow \quad \uparrow$ factors product	

This is the **commutative property** of multiplication.

Multiply.

3.  $2 \times 4 = \underline{\quad}$        $4 \times 2 = \underline{\quad}$
4.  $3 \times 6 = \underline{\quad}$        $6 \times 3 = \underline{\quad}$
5.  $3 \times 4 = \underline{\quad}$        $4 \times 3 = \underline{\quad}$
6.  $7 \times 2 = \underline{\quad}$        $2 \times 7 = \underline{\quad}$
7.  $2 \times 3 = \underline{\quad}$        $3 \times 2 = \underline{\quad}$

# Multiplication Facts: 4s and 5s

Practice the facts.

1.  $4 \times 1 = \underline{\quad}$

$4 \times 2 = \underline{\quad}$

$4 \times 3 = \underline{\quad}$

$4 \times 4 = \underline{\quad}$

$4 \times 5 = \underline{\quad}$

$4 \times 6 = \underline{\quad}$

$4 \times 7 = \underline{\quad}$

$4 \times 8 = \underline{\quad}$

$4 \times 9 = \underline{\quad}$

Count by 4s to  
check your answers.

2.  $5 \times 1 = \underline{\quad}$

$5 \times 2 = \underline{\quad}$

$5 \times 3 = \underline{\quad}$

$5 \times 4 = \underline{\quad}$

$5 \times 5 = \underline{\quad}$

$5 \times 6 = \underline{\quad}$

$5 \times 7 = \underline{\quad}$

$5 \times 8 = \underline{\quad}$

$5 \times 9 = \underline{\quad}$

Count by 5s to  
check your answers.

The ones digit is  
 $\underline{\quad}$  or  $\underline{\quad}$ .



Draw groups of objects to show each multiplication fact.

3.  $4 \times 3 = 12$

4.  $5 \times 4 = 20$

5.  $4 \times 7 = 28$

6.  $5 \times 6 = 30$

7.  $5 \times 1 = 5$

8.  $5 \times 3 = 15$

# Multiplication Facts: 0s and 1s

5 groups of 0 objects is

$$0 + 0 + 0 + 0 + 0 = 0$$

$$5 \times 0 = 0$$

$$\text{And } 0 \times 5 = 0$$

5 groups of 1 object is

$$1 + 1 + 1 + 1 + 1 = 5$$

$$5 \times 1 = 5$$

$$\text{And } 1 \times 5 = 5$$

Practice the facts.

1.  $0 \times 1 = \underline{\quad}$

$0 \times 2 = \underline{\quad}$

$0 \times 3 = \underline{\quad}$

$0 \times 4 = \underline{\quad}$

$0 \times 5 = \underline{\quad}$

$0 \times 6 = \underline{\quad}$

$0 \times 7 = \underline{\quad}$

$0 \times 8 = \underline{\quad}$

$0 \times 9 = \underline{\quad}$

2.  $1 \times 1 = \underline{\quad}$

$1 \times 2 = \underline{\quad}$

$1 \times 3 = \underline{\quad}$

$1 \times 4 = \underline{\quad}$

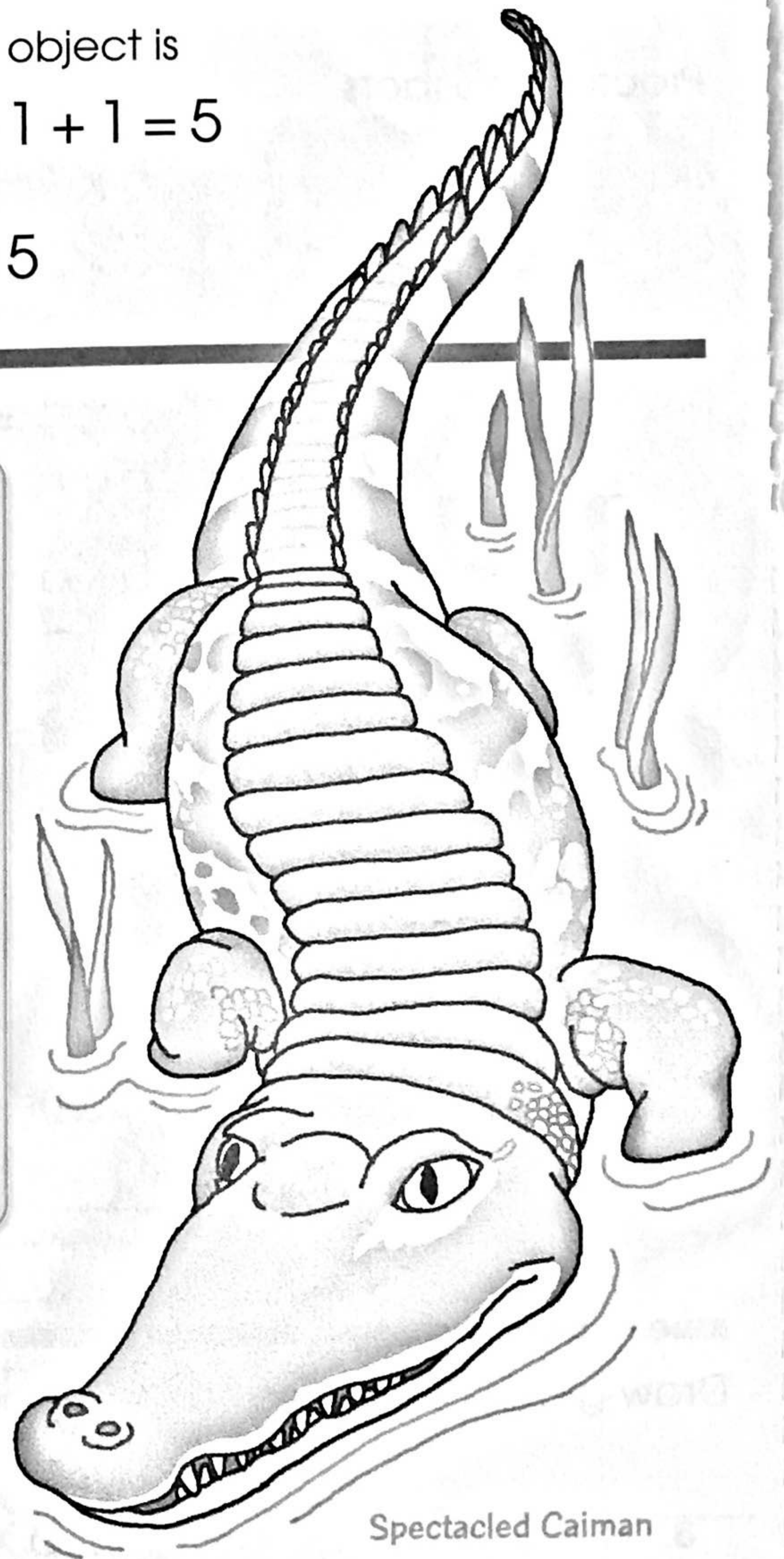
$1 \times 5 = \underline{\quad}$

$1 \times 6 = \underline{\quad}$

$1 \times 7 = \underline{\quad}$

$1 \times 8 = \underline{\quad}$

$1 \times 9 = \underline{\quad}$



Spectacled Caiman

3. Look at all the products in problem 1. What is the product of 0 and any number?

This is the **zero property** of multiplication.

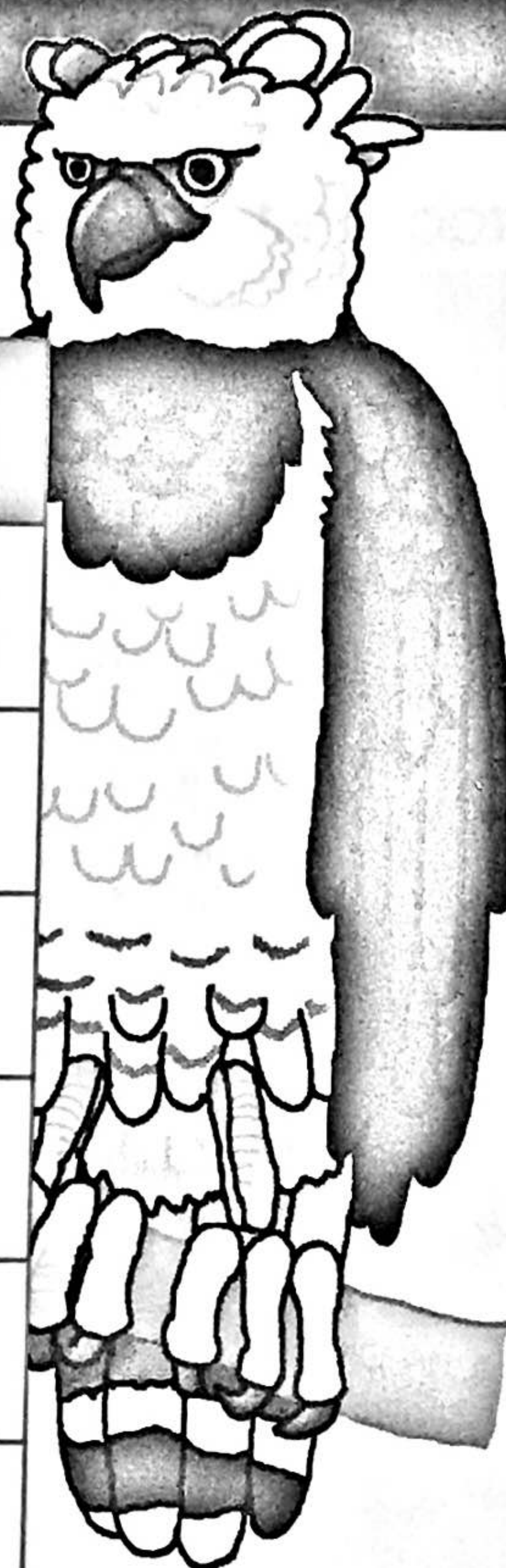
4. Look at all the products in problem 2. What is the product of 1 and any number?

This is the **identity property** of multiplication.

# Multiplication Facts Review

1. Fill in the table. Look for patterns in the table.

x	0	1	2	3	4	5	6	7	8	9
0									0	
1										9
2							12			
3										
4		4								
5	0		10							



Harpy Eagle

2. Look at the 2s row. List the products. \_\_\_\_\_

What are the ones digits of the 2s facts? \_\_\_\_\_

3. Look at the 5s row. List the products. \_\_\_\_\_

What are the ones digits of the 5s facts? \_\_\_\_\_

4. Look at the 1s row. What do you notice about the products? \_\_\_\_\_

\_\_\_\_\_

5. Look at the 0s row. What is each product? \_\_\_\_\_

Also, remember that  $0 \times 0 = 0$ .

6. What is  $3 \times 5$ ? \_\_\_\_\_ What is  $5 \times 3$ ? \_\_\_\_\_

What is  $3 \times 2$ ? \_\_\_\_\_ What is  $2 \times 3$ ? \_\_\_\_\_

Why are the products the same for each pair of facts? \_\_\_\_\_

\_\_\_\_\_



# Multiplication Facts: 6s and 7s

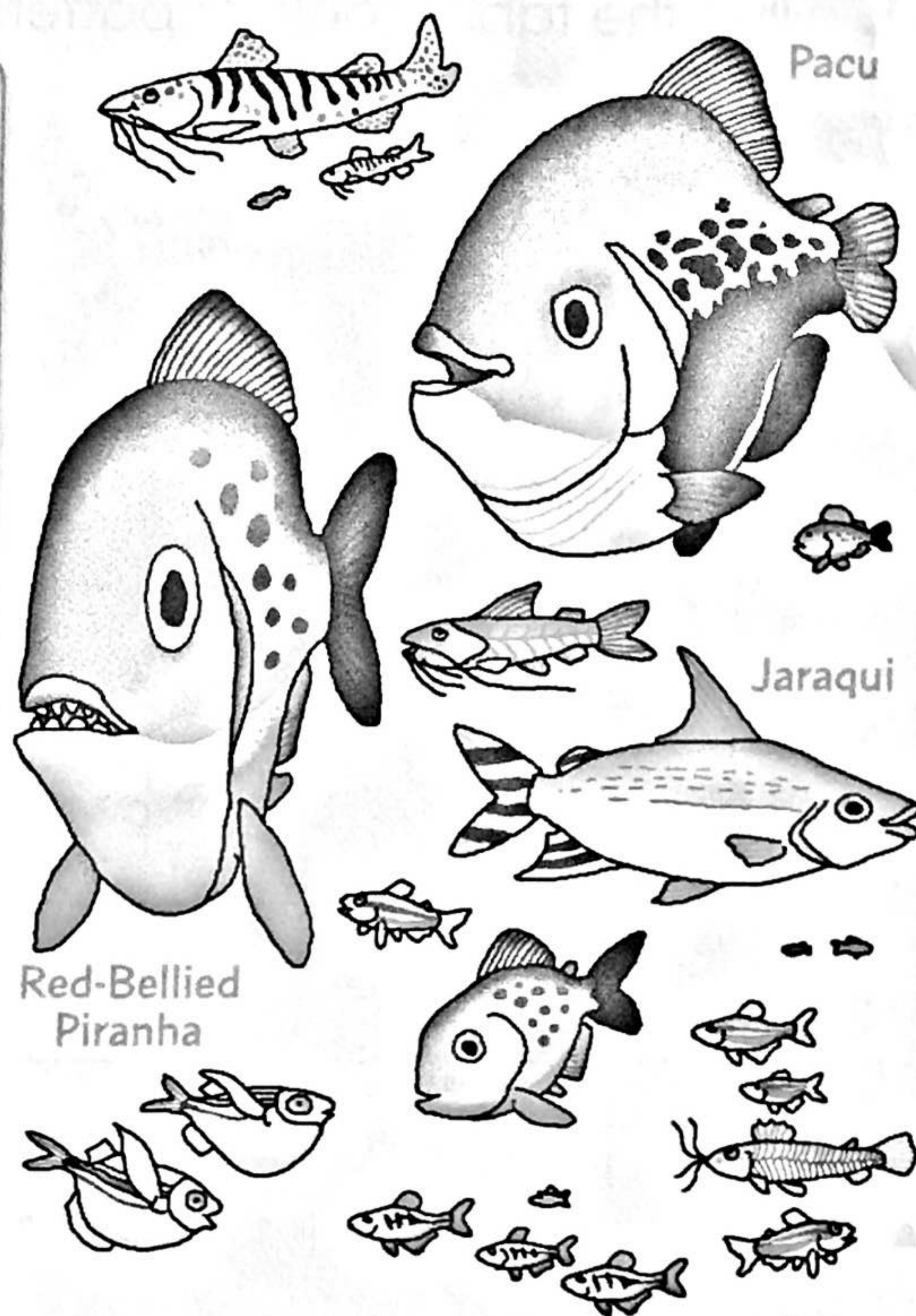
Practice the facts.

- $6 \times 0 = \underline{\quad}$   
 $6 \times 1 = \underline{\quad}$   
 $6 \times 2 = \underline{\quad}$   
 $6 \times 3 = \underline{\quad}$   
 $6 \times 4 = \underline{\quad}$   
 $6 \times 5 = \underline{\quad}$   
 $6 \times 6 = \underline{\quad}$   
 $6 \times 7 = \underline{\quad}$   
 $6 \times 8 = \underline{\quad}$   
 $6 \times 9 = \underline{\quad}$

Count by 6s to check your answers.

- $7 \times 0 = \underline{\quad}$   
 $7 \times 1 = \underline{\quad}$   
 $7 \times 2 = \underline{\quad}$   
 $7 \times 3 = \underline{\quad}$   
 $7 \times 4 = \underline{\quad}$   
 $7 \times 5 = \underline{\quad}$   
 $7 \times 6 = \underline{\quad}$   
 $7 \times 7 = \underline{\quad}$   
 $7 \times 8 = \underline{\quad}$   
 $7 \times 9 = \underline{\quad}$

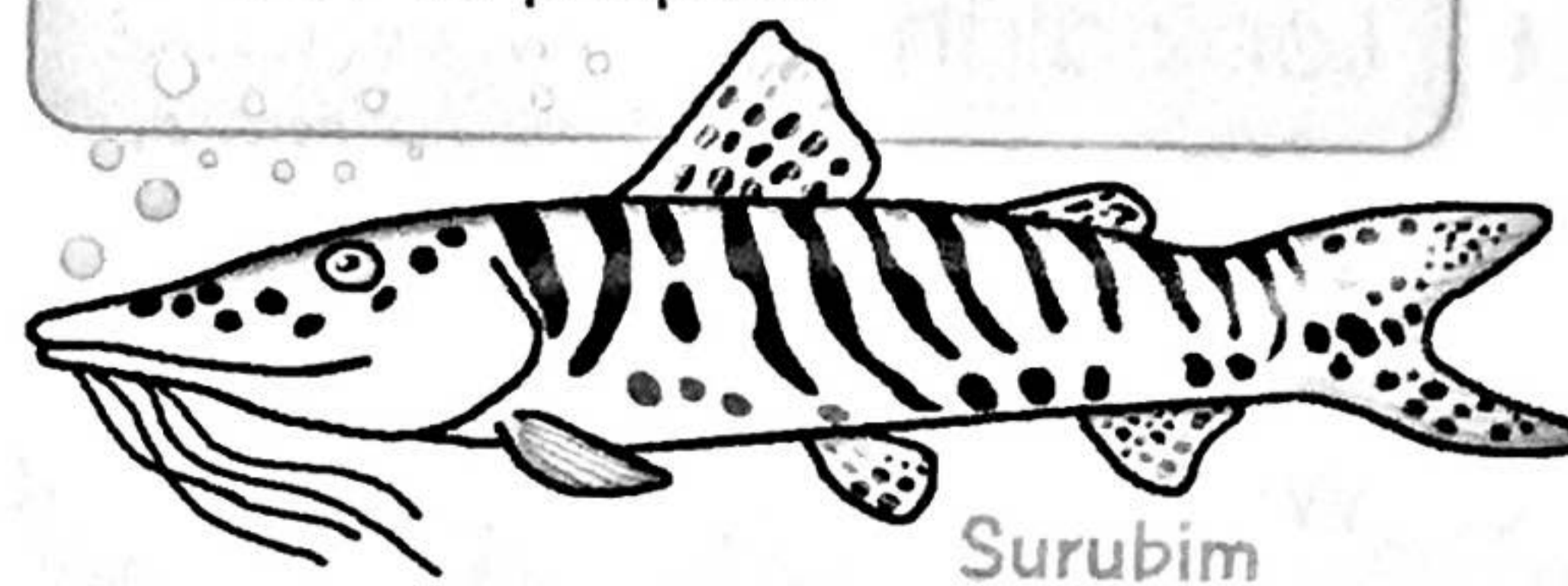
Count by 7s to check your answers.



3. Find as many multiplication facts as you can in this number search puzzle.

7	5	35	5	8	40	3	2
3	6	18	3	1	3	2	4
21	30	42	15	8	5	6	8
7	9	63	4	6	24	9	7
8	7	56	3	48	6	4	2
7	8	49	12	54	28	36	4
7	1	7	5	35	6	0	0

**Hint:** There are 10 facts across, 9 facts down, and 9 facts along the diagonal. List the 28 facts on another sheet of paper.



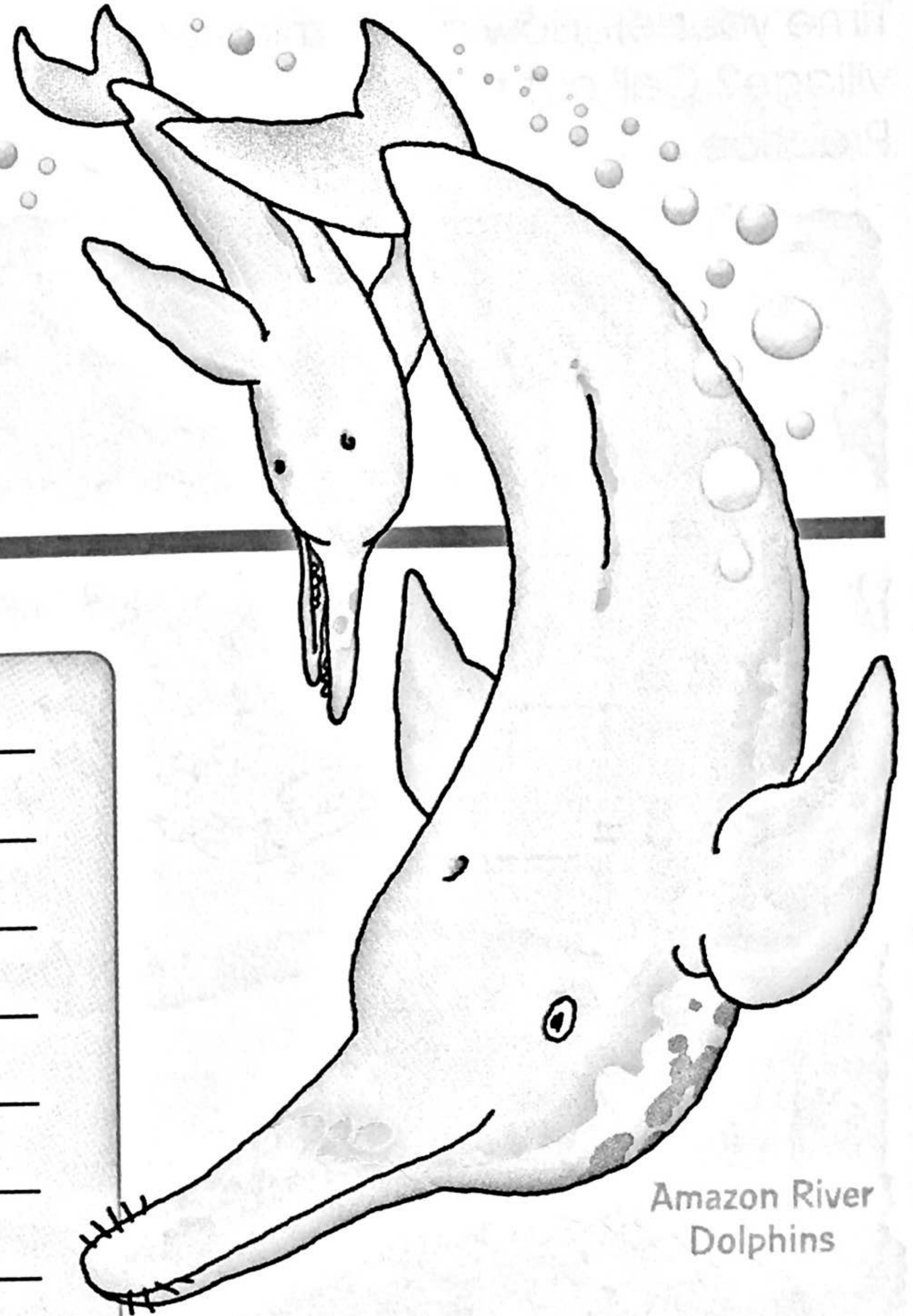
# Multiplication Facts: 8s and 9s

If you know your 4s facts, you can double them to know the 8s facts.

$$4 \times 3 = 12$$

$$4 \times 3 = 12$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 8 \times 3 = 24 \end{array}$$



Amazon River Dolphins

Practice the facts.

1.  $8 \times 0 = \underline{\quad}$

$8 \times 1 = \underline{\quad}$

$8 \times 2 = \underline{\quad}$

$8 \times 3 = \underline{\quad}$

$8 \times 4 = \underline{\quad}$

$8 \times 5 = \underline{\quad}$

$8 \times 6 = \underline{\quad}$

$8 \times 7 = \underline{\quad}$

$8 \times 8 = \underline{\quad}$

$8 \times 9 = \underline{\quad}$

Count by 8s to check your answers.

2.  $9 \times 0 = \underline{\quad}$

$9 \times 1 = \underline{\quad}$

$9 \times 2 = \underline{\quad}$

$9 \times 3 = \underline{\quad}$

$9 \times 4 = \underline{\quad}$

$9 \times 5 = \underline{\quad}$

$9 \times 6 = \underline{\quad}$

$9 \times 7 = \underline{\quad}$

$9 \times 8 = \underline{\quad}$

$9 \times 9 = \underline{\quad}$

Count by 9s to check your answers.

Look at each product for  $9 \times 1$  to  $9 \times 9$ . The sum of the digits is 9.  
 $9 \times 3 = 27$  and  $2 + 7 = 9$   
 This is a good way to remember the facts!

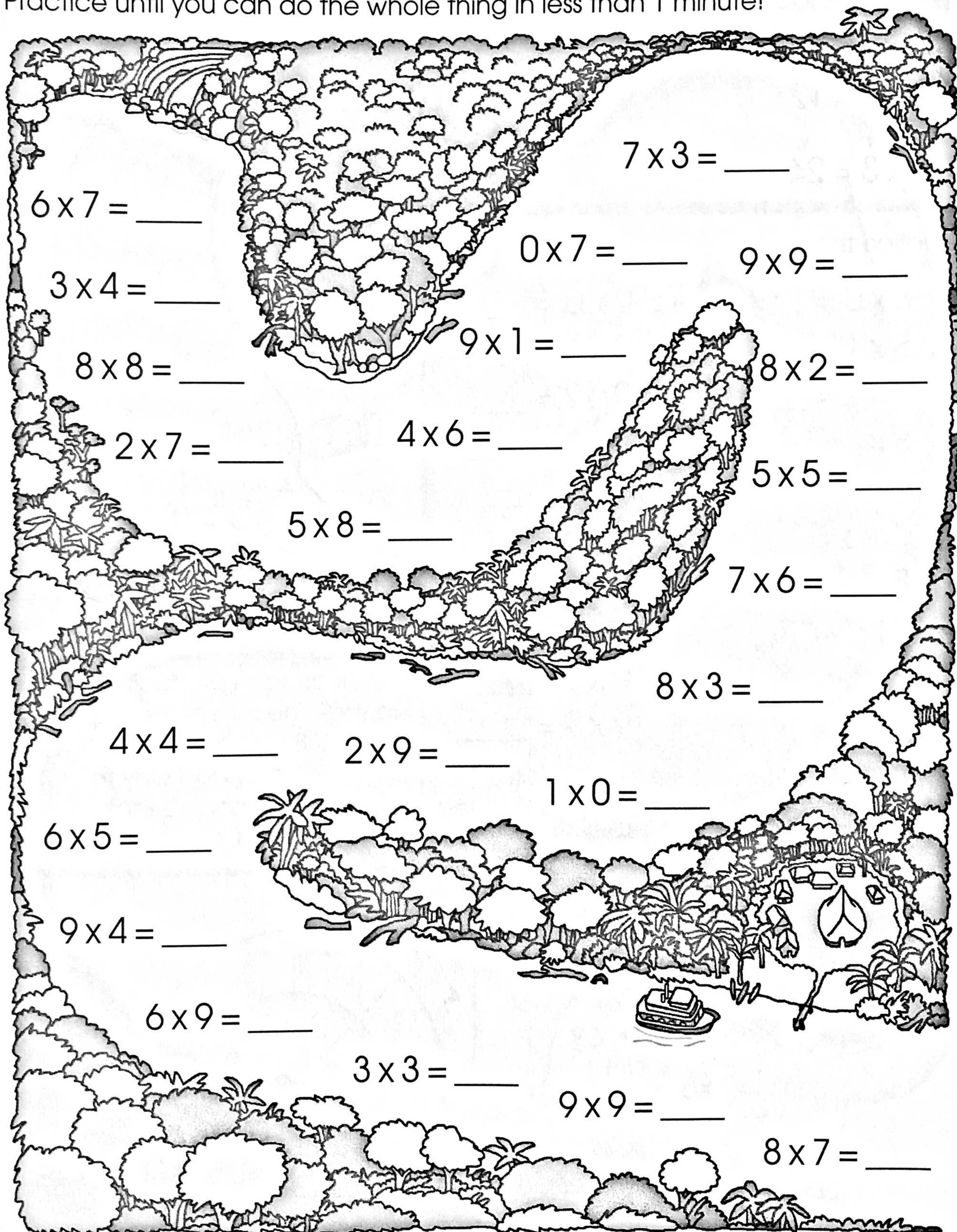
Multiply.

3.

4.

# Multiplication Facts Review

Time yourself. How many minutes will it take you to go from the waterfall to the village? Call out the answers to a friend. Can you do it in less than 3 minutes? Practice until you can do the whole thing in less than 1 minute!



# The "Find the Products" Game

The first player to get four in a row **wins!**

How to play:

1. You'll need 2 or more players.
2. Take turns calling out facts, such as  $7 \times 5$ .
3. Using a different color marker for each player, write your answer where the two numbers meet on the chart.  
Example:  $7 \times 5 = 35$
4. Try to block your opponent from getting four in a row.

x	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7								35		
8										
9										



x	0	1	2	3	4	5	6	7	8	9
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

Use this chart to check multiplication problems on other pages.

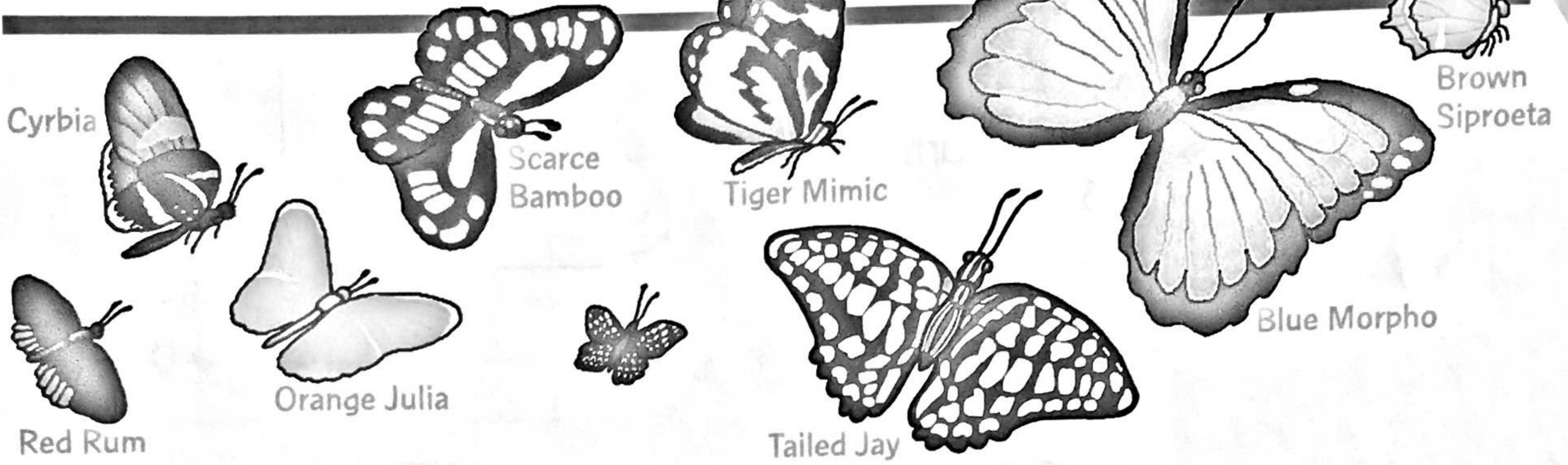
# Writing Multiplication Facts Two Ways



Multiplication problems can be written two ways.

$$\begin{array}{r} 4 \\ \times 3 \\ \hline 12 \end{array}$$

is the same as  $4 \times 3 = 12$ .



Multiply.

1.  $3 \times 2 = \underline{\quad}$

11.  $\begin{array}{r} 9 \\ \times 4 \\ \hline \end{array}$

12.  $\begin{array}{r} 7 \\ \times 1 \\ \hline \end{array}$

13.  $\begin{array}{r} 9 \\ \times 9 \\ \hline \end{array}$

2.  $3 \times 9 = \underline{\quad}$

3.  $4 \times 5 = \underline{\quad}$

14.  $\begin{array}{r} 8 \\ \times 5 \\ \hline \end{array}$

15.  $\begin{array}{r} 8 \\ \times 7 \\ \hline \end{array}$

16.  $\begin{array}{r} 9 \\ \times 8 \\ \hline \end{array}$

4.  $4 \times 9 = \underline{\quad}$

5.  $5 \times 6 = \underline{\quad}$

6.  $5 \times 9 = \underline{\quad}$

17.  $\begin{array}{r} 5 \\ \times 3 \\ \hline \end{array}$

18.  $\begin{array}{r} 9 \\ \times 6 \\ \hline \end{array}$

19.  $\begin{array}{r} 5 \\ \times 4 \\ \hline \end{array}$

7.  $6 \times 2 = \underline{\quad}$

8.  $6 \times 7 = \underline{\quad}$

9.  $7 \times 4 = \underline{\quad}$

20.  $\begin{array}{r} 8 \\ \times 4 \\ \hline \end{array}$

21.  $\begin{array}{r} 5 \\ \times 0 \\ \hline \end{array}$

22.  $\begin{array}{r} 6 \\ \times 6 \\ \hline \end{array}$

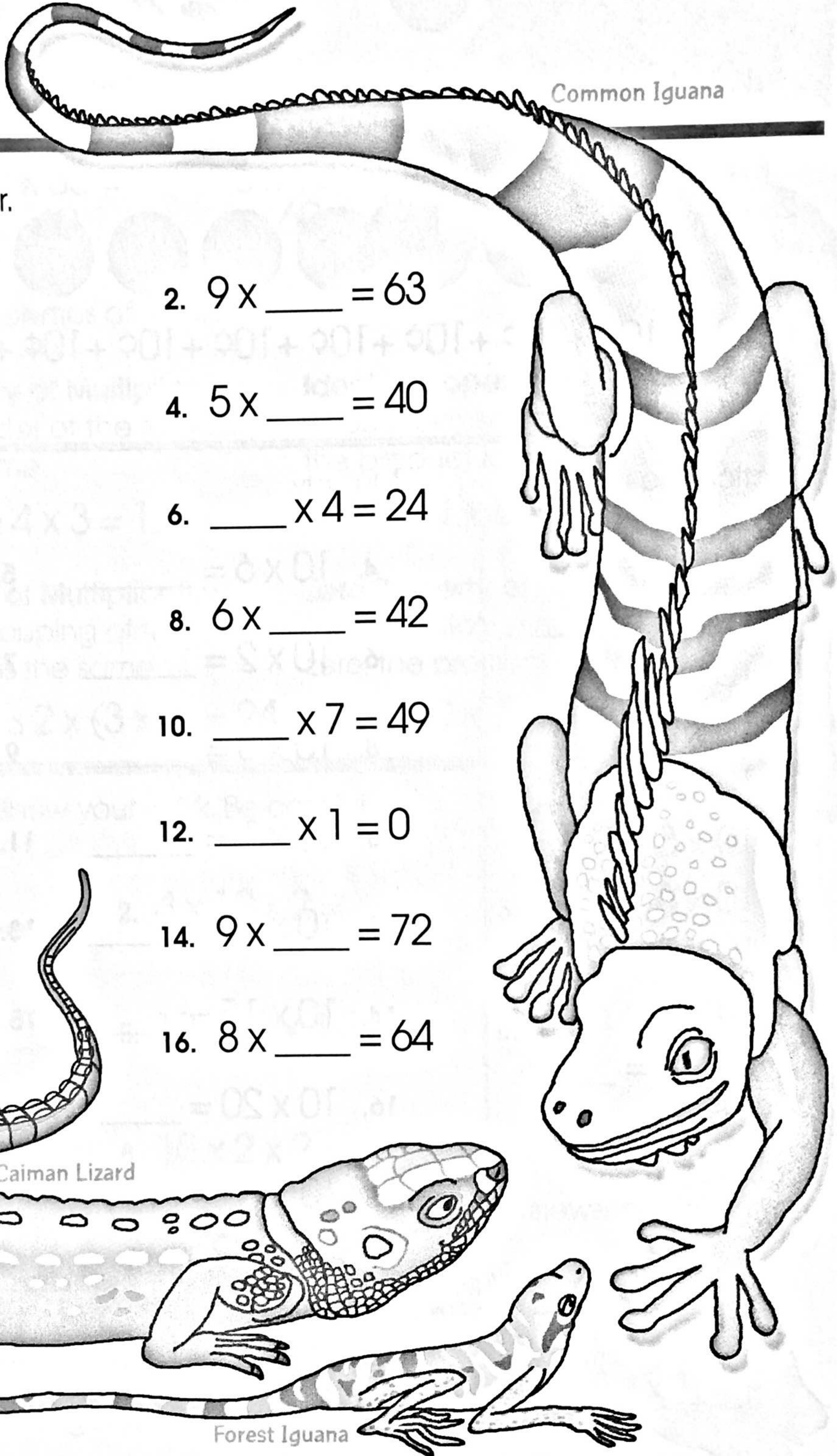
10.  $7 \times 8 = \underline{\quad}$

# Finding Missing Factors

factor   factor   product

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 5 \times \underline{\quad} & = & 35 \end{array}$$

The missing factor is 7  
because  $5 \times 7 = 35$ .



Find the missing factor.

1.  $5 \times \underline{\quad} = 20$

2.  $9 \times \underline{\quad} = 63$

3.  $9 \times \underline{\quad} = 9$

4.  $5 \times \underline{\quad} = 40$

5.  $\underline{\quad} \times 8 = 32$

6.  $\underline{\quad} \times 4 = 24$

7.  $9 \times \underline{\quad} = 81$

8.  $6 \times \underline{\quad} = 42$

9.  $\underline{\quad} \times 7 = 14$

10.  $\underline{\quad} \times 7 = 49$

11.  $\underline{\quad} \times 1 = 9$

12.  $\underline{\quad} \times 1 = 0$

13.  $3 \times \underline{\quad} = 0$

14.  $9 \times \underline{\quad} = 72$

15.  $4 \times \underline{\quad} = 12$

16.  $8 \times \underline{\quad} = 64$

# Multiplying by 10

Find the amounts in cents.



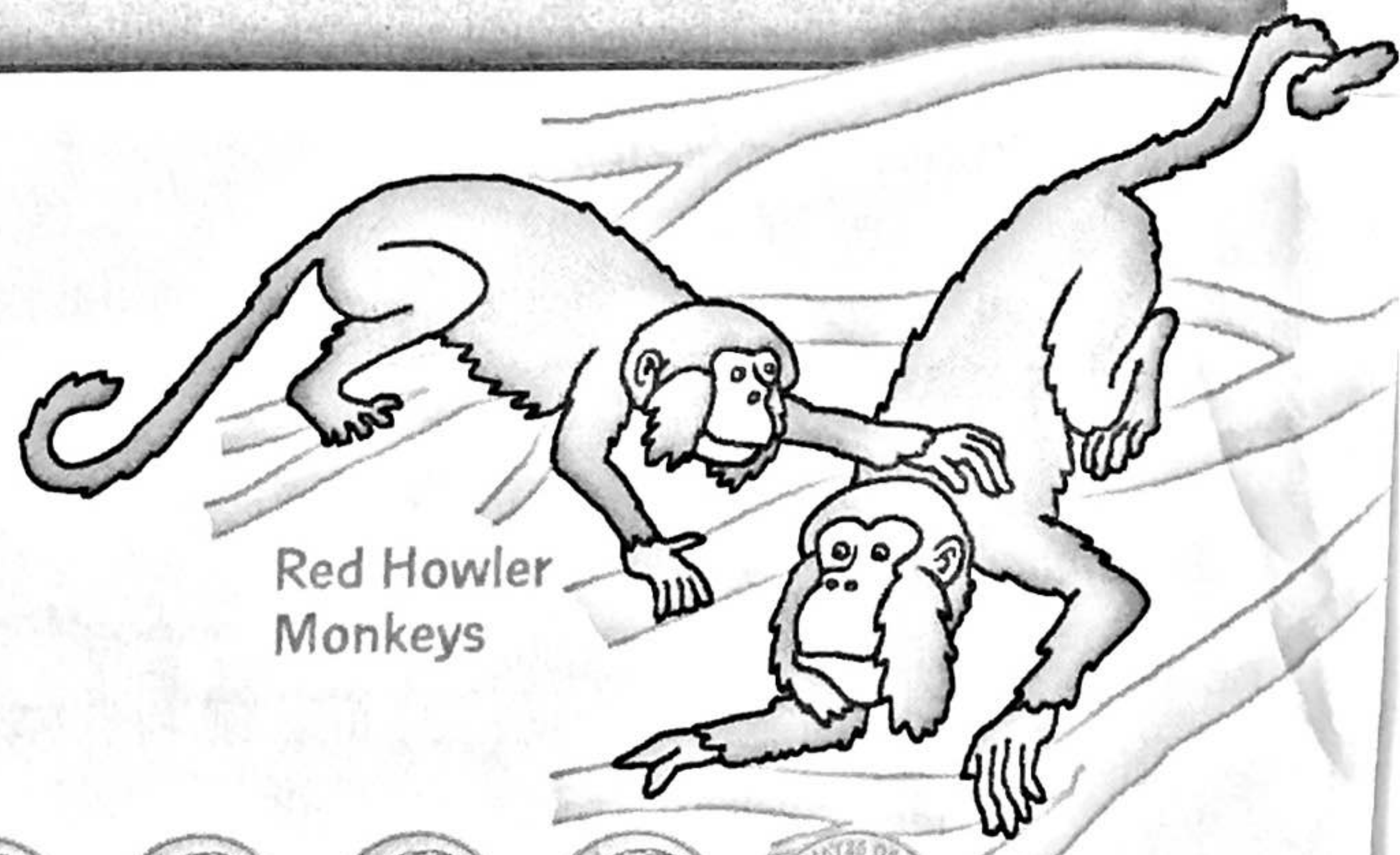
$$10¢ + 10¢ + 10¢ + 10¢ = \underline{\hspace{2cm}}$$

$$4 \times 10¢ = \underline{\hspace{2cm}}$$



$$10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ + 10¢ = \underline{\hspace{2cm}}$$

$$10 \times 10¢ = \underline{\hspace{2cm}}$$



Red Howler Monkeys

Practice the facts.

Multiply.

3.  $10 \times 0 = \underline{\hspace{2cm}}$

$10 \times 1 = \underline{\hspace{2cm}}$

$10 \times 2 = \underline{\hspace{2cm}}$

$10 \times 3 = \underline{\hspace{2cm}}$

$10 \times 4 = \underline{\hspace{2cm}}$

$10 \times 5 = \underline{\hspace{2cm}}$

$10 \times 6 = \underline{\hspace{2cm}}$

$10 \times 7 = \underline{\hspace{2cm}}$

$10 \times 8 = \underline{\hspace{2cm}}$

$10 \times 9 = \underline{\hspace{2cm}}$

$10 \times 10 = \underline{\hspace{2cm}}$

Count by 10s to check your answers.

4.  $10 \times 6 = \underline{\hspace{2cm}}$

5.  $8 \times 10 = \underline{\hspace{2cm}}$

6.  $10 \times 2 = \underline{\hspace{2cm}}$

7.  $5 \times 10 = \underline{\hspace{2cm}}$

8.  $10 \times 3 = \underline{\hspace{2cm}}$

9.  $9 \times 10 = \underline{\hspace{2cm}}$

10.  $10 \times 1 = \underline{\hspace{2cm}}$

11.  $4 \times 10 = \underline{\hspace{2cm}}$

12.  $10 \times 7 = \underline{\hspace{2cm}}$

13.  $10 \times 12 = \underline{\hspace{2cm}}$

14.  $10 \times 15 = \underline{\hspace{2cm}}$

15.  $10 \times 25 = \underline{\hspace{2cm}}$

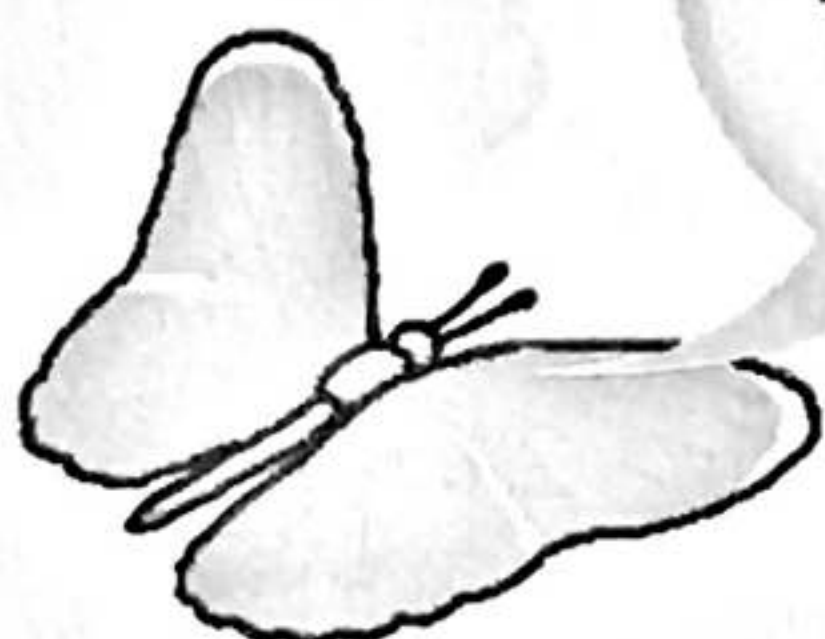
16.  $10 \times 20 = \underline{\hspace{2cm}}$

17.  $10 \times 32 = \underline{\hspace{2cm}}$

18.  $10 \times 50 = \underline{\hspace{2cm}}$

19. Look at all the problems above. What is one of the factors in each problem?  $\underline{\hspace{2cm}}$

What is the ones digit in each product?  $\underline{\hspace{2cm}}$



When you multiply a non-zero number by 10, it is like writing the number and zero.

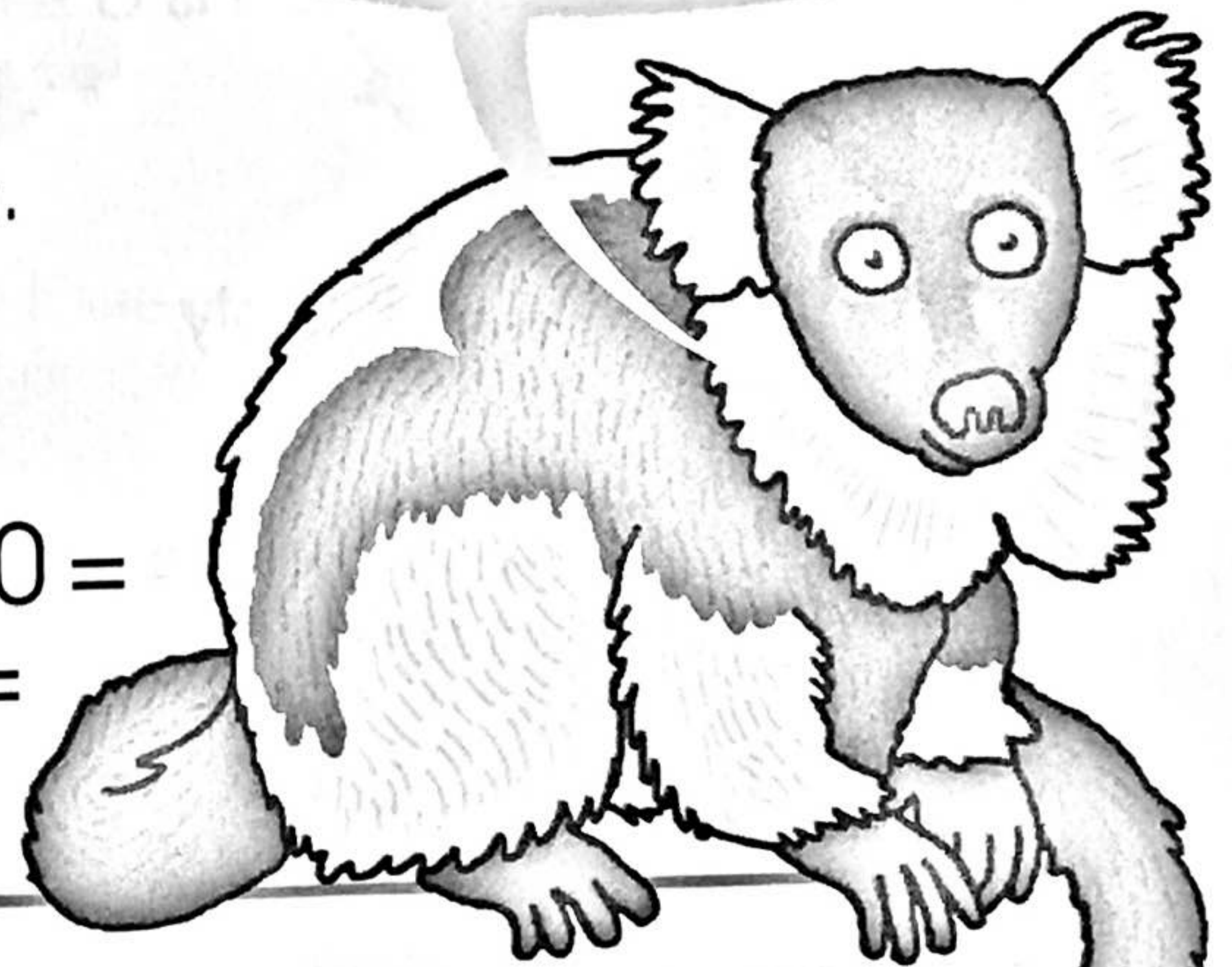
# Multiplying Three Factors

Multiply the way that is easiest for you.

You can find the product of three factors by multiplying them in any order or grouping. This is the **associative property** of multiplication.

Multiply:  $2 \times 10 \times 3$

$$\begin{array}{l} (2 \times 10) \times 3 = 2 \times (10 \times 3) = (2 \times 3) \times 10 = \\ 20 \times 3 = \quad \quad 2 \times 30 = \quad \quad 6 \times 10 = \\ 60 \quad \quad \quad 60 \quad \quad \quad 60 \end{array}$$



Ruffed Lemur

Remember these properties of multiplication:

## Commutative Property of Multiplication

If you change the order of the factors, the product is the same.

$$3 \times 4 = 12 \text{ and } 4 \times 3 = 12$$

## Associative Property of Multiplication

If you change the grouping of the factors, the product is the same.

$$(2 \times 3) \times 4 = 24 \text{ and } 2 \times (3 \times 4) = 24$$

## Identity Property of Multiplication

If you multiply a number and 1, the product is that number.

$$1 \times 8 = 8$$

## Zero Property of Multiplication

If you multiply a number and zero, the product is zero.

$$0 \times 7 = 0$$

Multiply the factors. Show your work. Be careful!

1.  $2 \times 1 \times 8 = \underline{\quad}$

2.  $4 \times 10 \times 2 = \underline{\quad}$

3.  $5 \times 10 \times 0 = \underline{\quad}$

4.  $3 \times 10 \times 3 = \underline{\quad}$

5.  $10 \times 10 \times 1 = \underline{\quad}$

6.  $2 \times 3 \times 5 = \underline{\quad}$

7.  $8 \times 3 \times 2 = \underline{\quad}$

8.  $10 \times 2 \times 2 = \underline{\quad}$

9.  $3 \times 6 \times 1 = \underline{\quad}$

10.  $10 \times 1 \times 10 = \underline{\quad}$

11.  $2 \times 10 \times 3 = \underline{\quad}$

12.  $9 \times 1 \times 9 = \underline{\quad}$

13.  $10 \times 0 \times 10 = \underline{\quad}$

14.  $3 \times 3 \times 3 = \underline{\quad}$

15.  $9 \times 10 \times 10 = \underline{\quad}$



# Multiplying by 11

Remember, multiplication is a shortcut for repeated addition.

1. Add.

$$\begin{array}{r} 11 \\ + 11 \\ \hline 22 \end{array}$$

$$\begin{array}{r} + 11 \\ \hline 33 \end{array}$$

$$\begin{array}{r} + 11 \\ \hline 44 \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

$$\begin{array}{r} + 11 \\ \hline \end{array}$$

2. Multiply.

$11 \times 1 = \underline{\quad}$

$11 \times 2 = \underline{\quad}$

$11 \times 3 = \underline{\quad}$

$11 \times 4 = \underline{\quad}$

$11 \times 5 = \underline{\quad}$

$11 \times 6 = \underline{\quad}$

$11 \times 7 = \underline{\quad}$

$11 \times 8 = \underline{\quad}$

$11 \times 9 = \underline{\quad}$

$11 \times 10 = \underline{\quad}$

$11 \times 11 = \underline{\quad}$

$11 \times 12 = \underline{\quad}$

You can think of 11 as  $10 + 1$  when you want to remember the 11s.



Tamandua

3. Look at the huge addition problem. Why is it easy to add 11?

\_\_\_\_\_

4. Look at all the products. What pattern do you see for the first 9 products?

\_\_\_\_\_

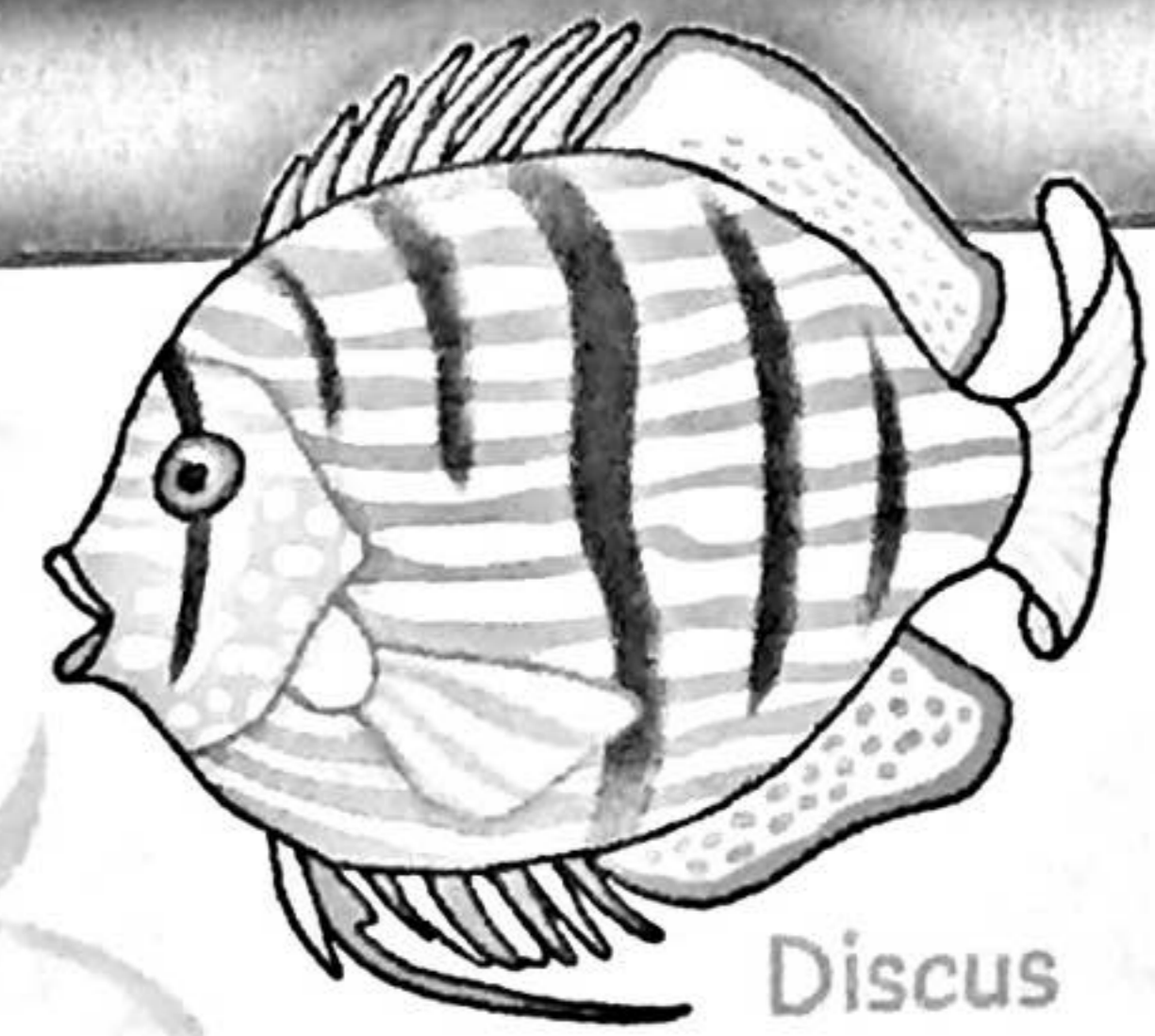
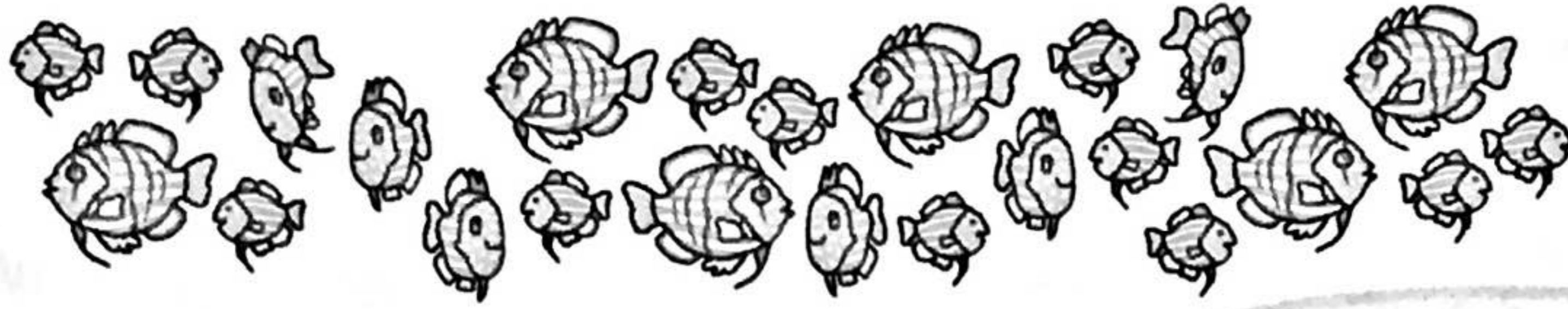
5. What do you think is  $11 \times 0$ ? \_\_\_\_\_  
Why?

\_\_\_\_\_

6. What do you think is  $11 \times 13$ ? \_\_\_\_\_  
Why?

\_\_\_\_\_

# Multiplying by 12



Discus

Looks like there are dozens of problems!

1. Add.

$$\begin{array}{r} 12 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 24 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 36 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} 48 \\ + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

$$\begin{array}{r} + 12 \\ \hline \end{array}$$

2. Multiply.

$12 \times 1 = \underline{\quad}$

$12 \times 2 = \underline{\quad}$

$12 \times 3 = \underline{\quad}$

$12 \times 4 = \underline{\quad}$

$12 \times 5 = \underline{\quad}$

$12 \times 6 = \underline{\quad}$

$12 \times 7 = \underline{\quad}$

$12 \times 8 = \underline{\quad}$

$12 \times 9 = \underline{\quad}$

$12 \times 10 = \underline{\quad}$

$12 \times 11 = \underline{\quad}$

$12 \times 12 = \underline{\quad}$

3. Look at the huge addition problem. Is each sum even or odd?

\_\_\_\_\_

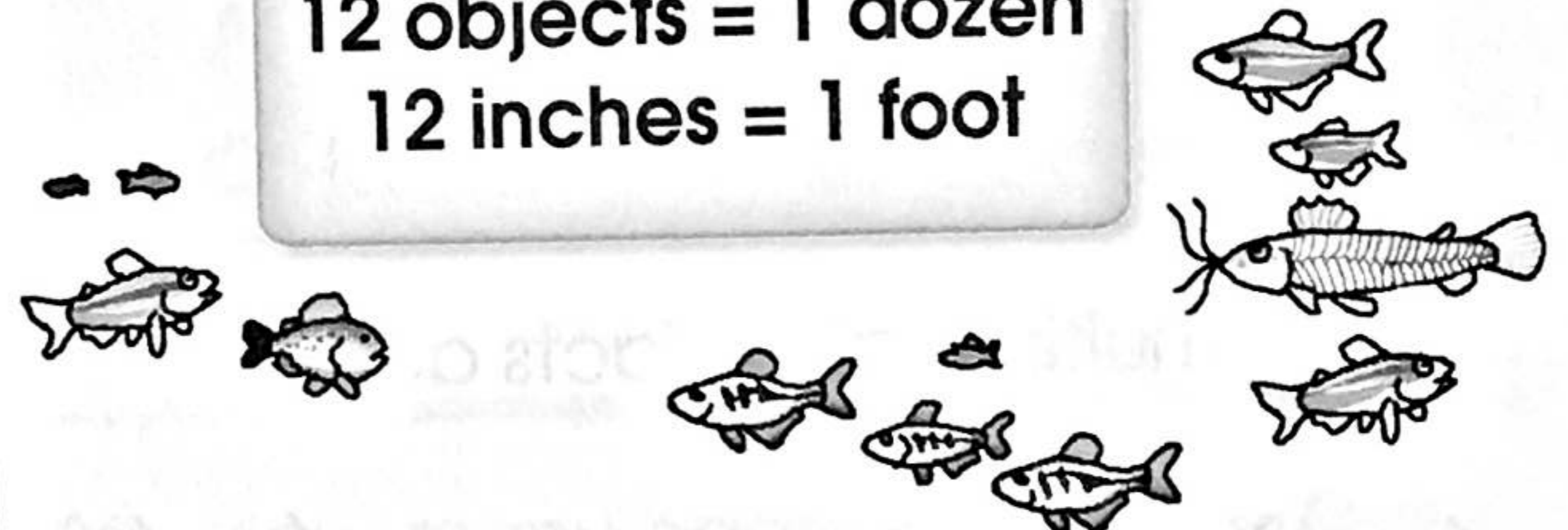
4. Look at all the products. What is the ones digit for each product?

\_\_\_\_\_

5. What do you think is  $12 \times 0$ ? \_\_\_\_\_  
Why?

\_\_\_\_\_

12 objects = 1 dozen  
12 inches = 1 foot



6. How many eggs are in 7 dozen?

\_\_\_\_\_

7. How many inches are in 5 feet?

\_\_\_\_\_

# What I Learned about Multiplication

1. Write an addition and multiplication sentence for the picture.



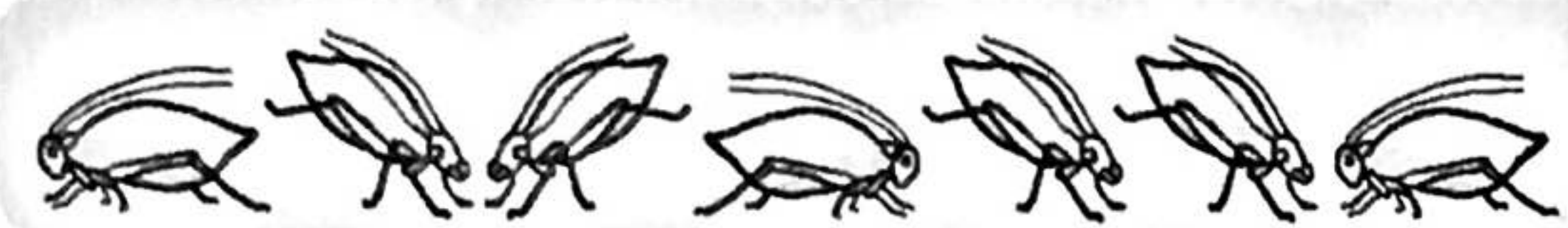
$$\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \text{ groups of } \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$



Draw groups of objects to show each multiplication fact. Then write the answer.

2.  $3 \times 8 = \underline{\quad}$

3.  $6 \times 1 = \underline{\quad}$

4.  $7 \times 2 = \underline{\quad}$

5.  $4 \times 4 = \underline{\quad}$

Long-Horned Grasshopper



Think of multiplication facts and properties to complete each problem.

6.  $9 \times 1 = \underline{\quad}$

7.  $6 \times 6 = \underline{\quad}$

8.  $7 \times 3 = 3 \times \underline{\quad}$

9.  $0 \times 8 = \underline{\quad}$

10.  $0 \times 0 = \underline{\quad}$

11.  $4 \times 1 \times 6 = \underline{\quad}$

Multiply.

12.  $7 \times 6 = \underline{\quad}$

13.  $4 \times 9 = \underline{\quad}$

14.  $8 \times 7 = \underline{\quad}$

15.  $8 \times 8 = \underline{\quad}$

16.  $10 \times 7 = \underline{\quad}$

17.  $11 \times 7 = \underline{\quad}$

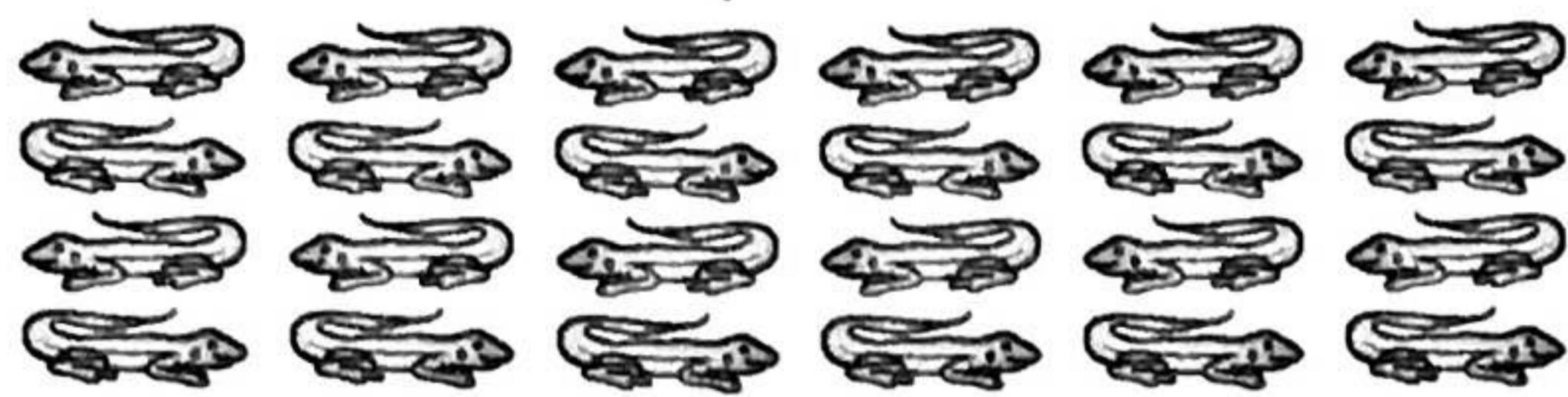
18.  $12 \times 8 = \underline{\quad}$

19.  $10 \times 10 = \underline{\quad}$

20.  $6 \times 9 = \underline{\quad}$

Circle the answer.

21. Which of the following does **not** tell about this picture?



- A.  $4 + 6$    B.  $4 + 4 + 4 + 4 + 4 + 4$   
C.  $6 \times 4$    D.  $4 \times 6$

22. For the 2s multiplication facts, the ones digit is \_\_\_\_\_ in the products.

- A. 1, 2, 3, 4, or 5  
B. 2, 4, 6, 8, or 0  
C. 1, 2, 4, or 8  
D. 0 or 2

23. Which number makes this number sentence true?

$$6 \times 1 = \underline{\quad}$$

- A. 0   B. 1   C. 6   D. 60

24. Which number makes this number sentence true?

$$2 \times 4 \times \underline{\quad} = 80$$

- A. 6   B. 8   C. 10   D. 12

25. Which number makes this number sentence true?

$$5 \times \underline{\quad} = 0$$

- A. 10   B. 5   C. 1   D. 0

26. In the fact  $5 \times 9 = 45$ , the 9 is a \_\_\_\_\_.

- A. addend   B. divisor  
C. factor   D. product

27. How many inches are in 6 feet?

- A. 12   B. 60  
C. 66   D. 72

28. How many eggs are in 9 dozen?

- A. 12   B. 96  
C. 108   D. 120

29. Which number makes this number sentence true?

$$6 \times \underline{\quad} = 60$$

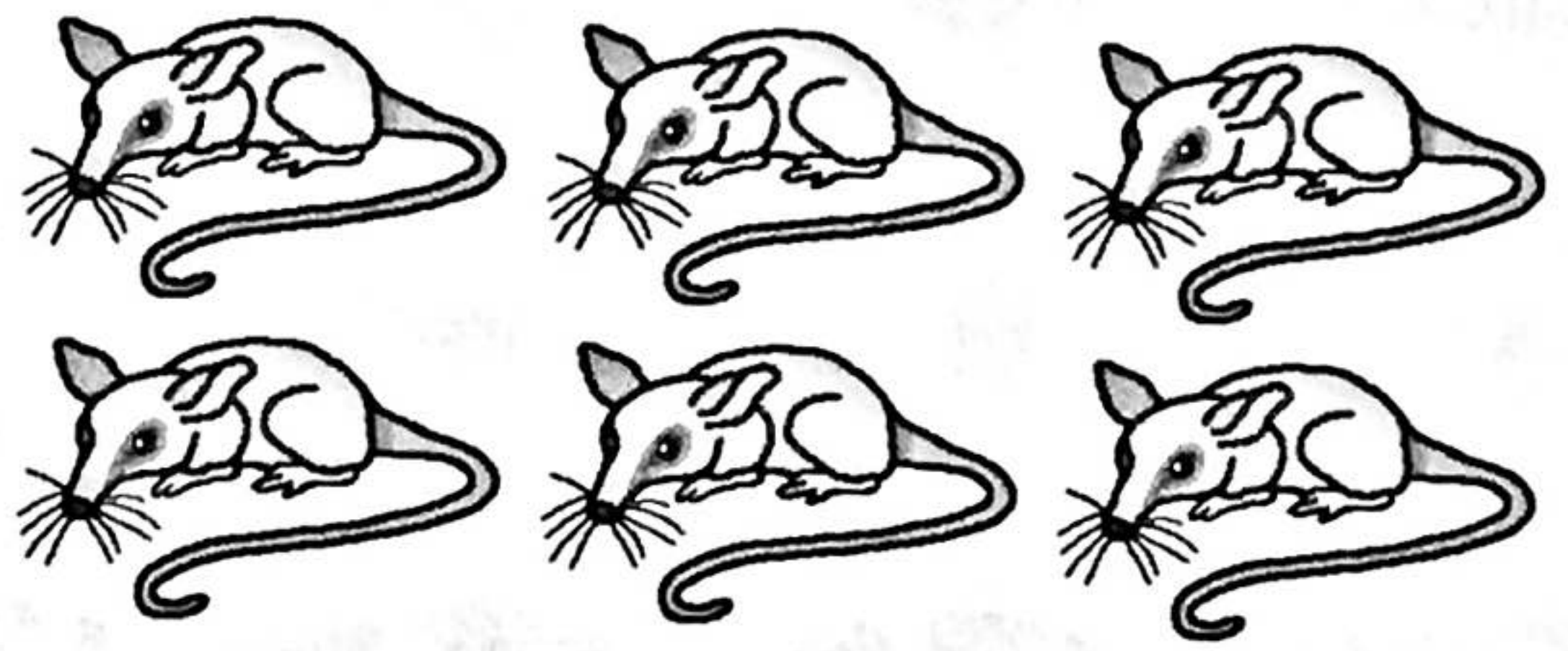
- A. 0   B. 1   C. 10   D. 12

30.  $11 + 11 + 11 + 11 + 11$  is **not** the same as \_\_\_\_\_.

- A.  $11 \times 4$    B.  $5 \times 11$   
C.  $44 + 11$    D.  $33 + 11 + 11$

# Learning about Division

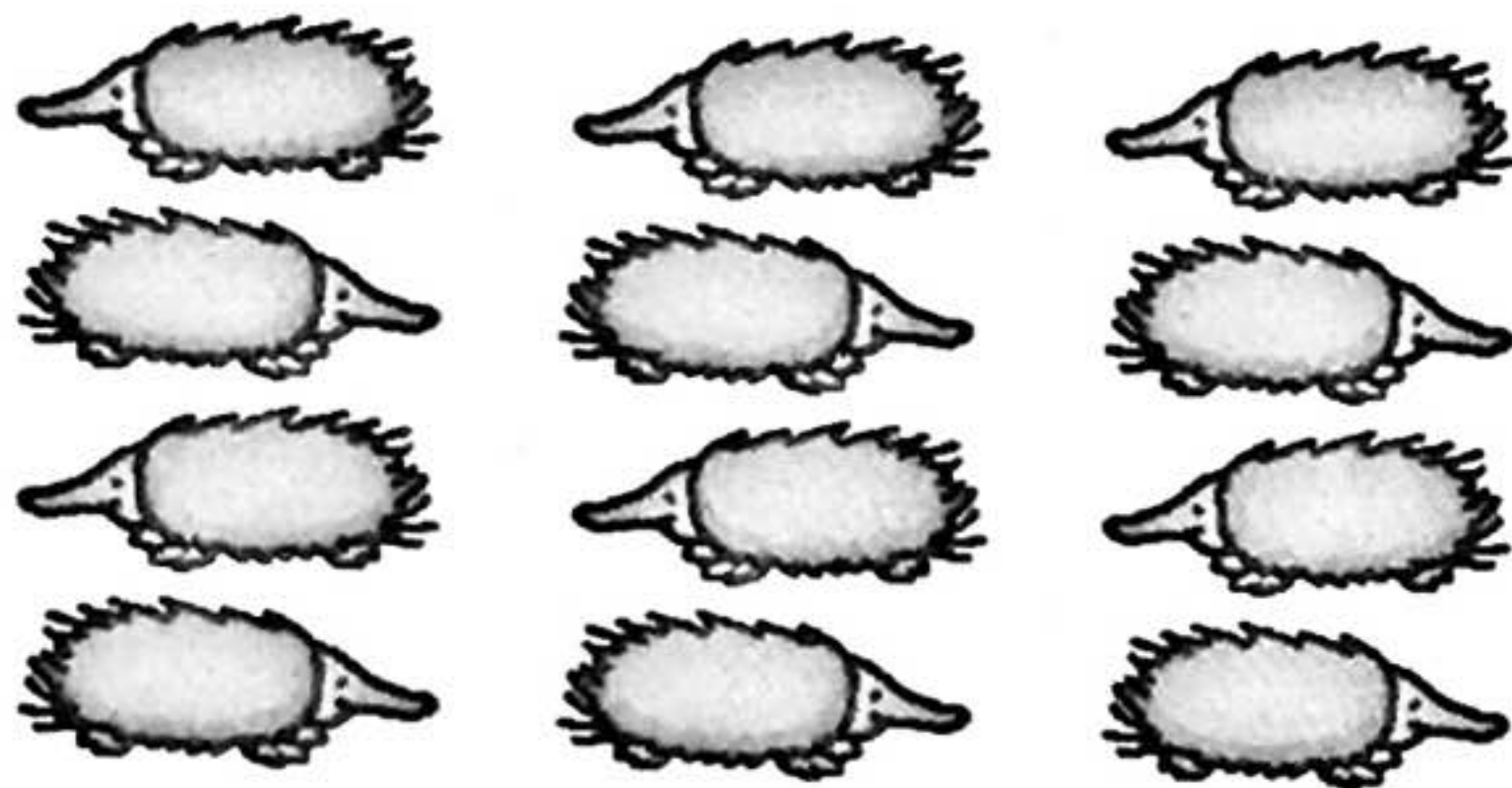
6 divided into 3 groups = 2 in each group  
 $6 \div 3 = 2$



6 divided into 2 groups = 3 in each group  
 $6 \div 2 = 3$

Write two division number sentences for the pictures.

1.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

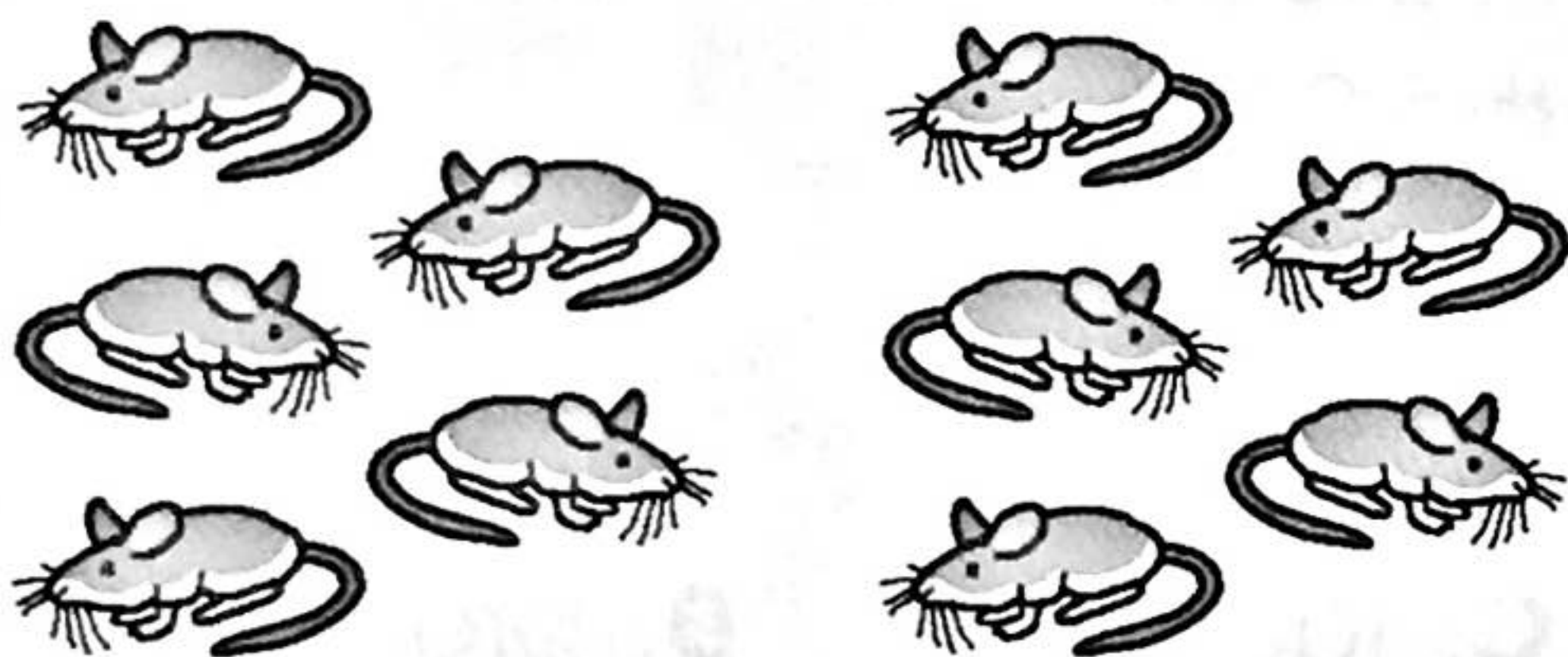
2.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

3.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

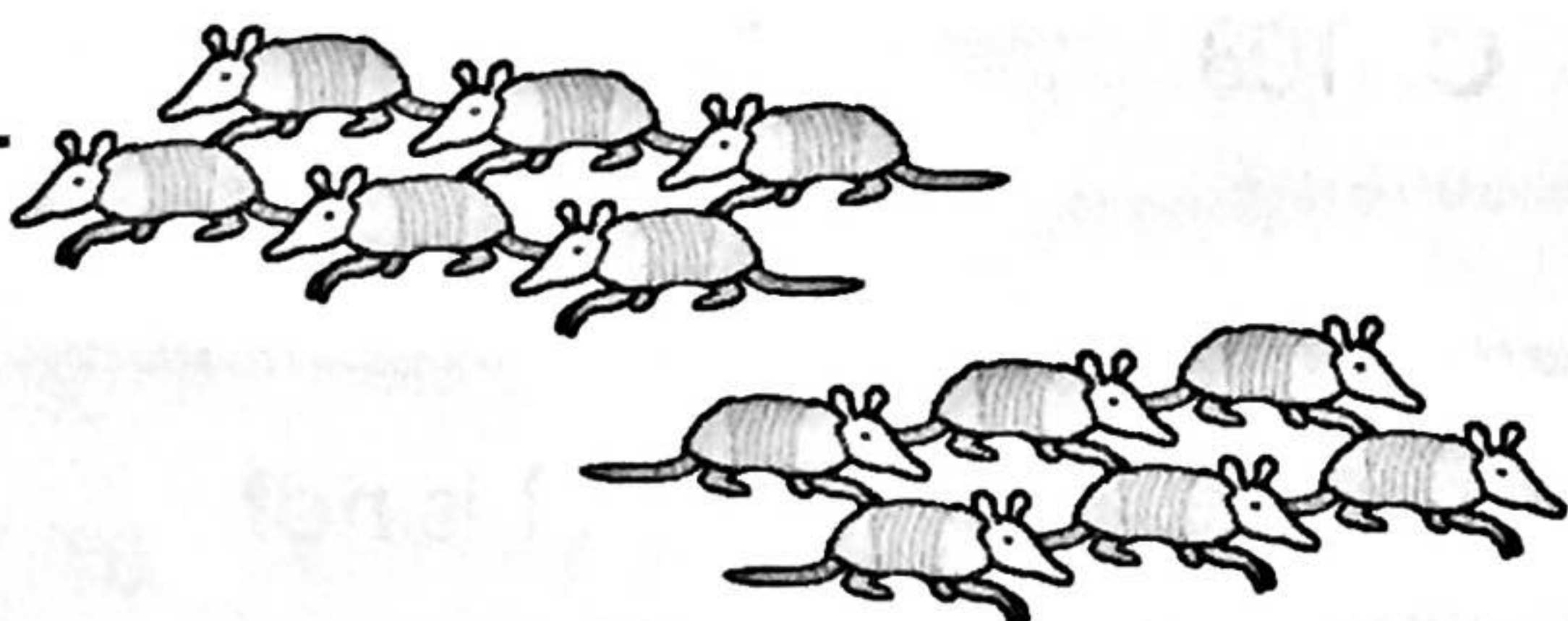
4.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

5.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

6.



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

# Learning about Division

If you know your multiplication facts, you are ready for division.

Here is a multiplication fact:

$$4 \times 3 = 12$$

Here are two related division facts:

$$12 \div 3 = 4 \text{ and } 12 \div 4 = 3$$



Hawk-Headed Parrot

Write related division facts for each multiplication fact.

1.  $8 \times 7 = 56$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

2.  $4 \times 9 = 36$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

3.  $5 \times 5 = 25$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

4.  $6 \times 7 = 42$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

5.  $3 \times 8 = 24$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

6.  $2 \times 7 = 14$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

7.  $7 \times 5 = 35$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

8.  $8 \times 9 = 72$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

9.  $4 \times 8 = 32$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

Solve the problem.

10. Joshua has collected 63 stamps from different countries. He has to divide them into 7 different albums. How many stamps will go into each album?

\_\_\_\_\_

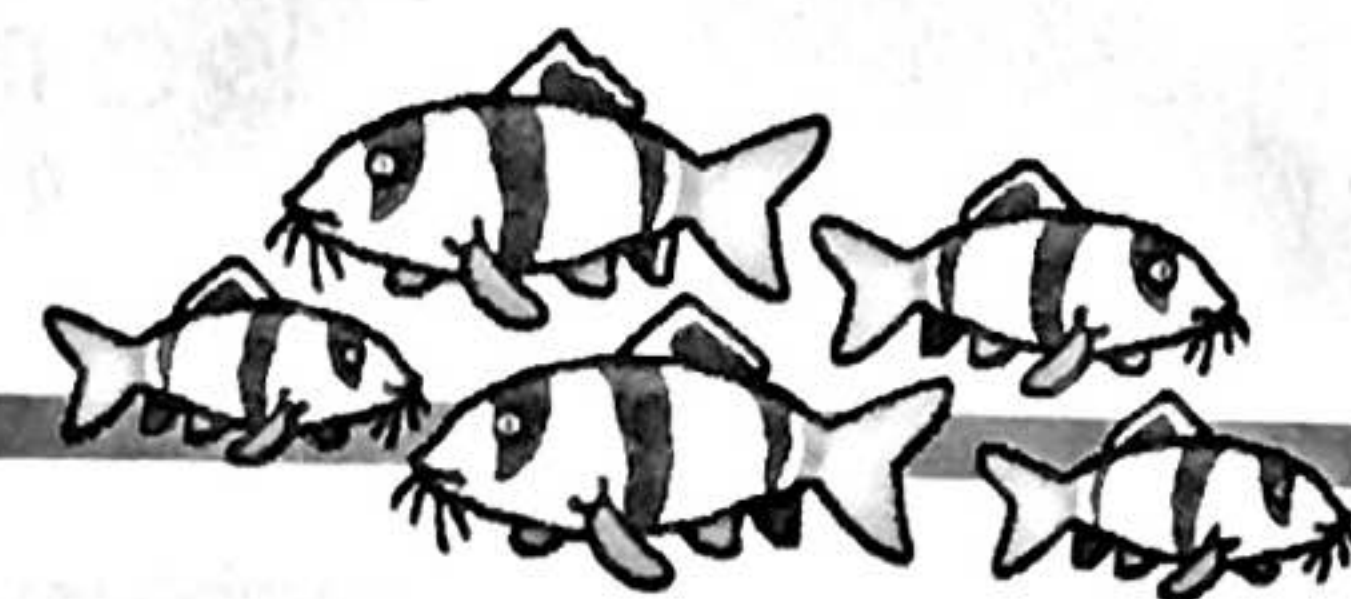
# Dividing by 2 and 3

There are 15 fish.

There are 3 groups.

There are 5 fish in each group.

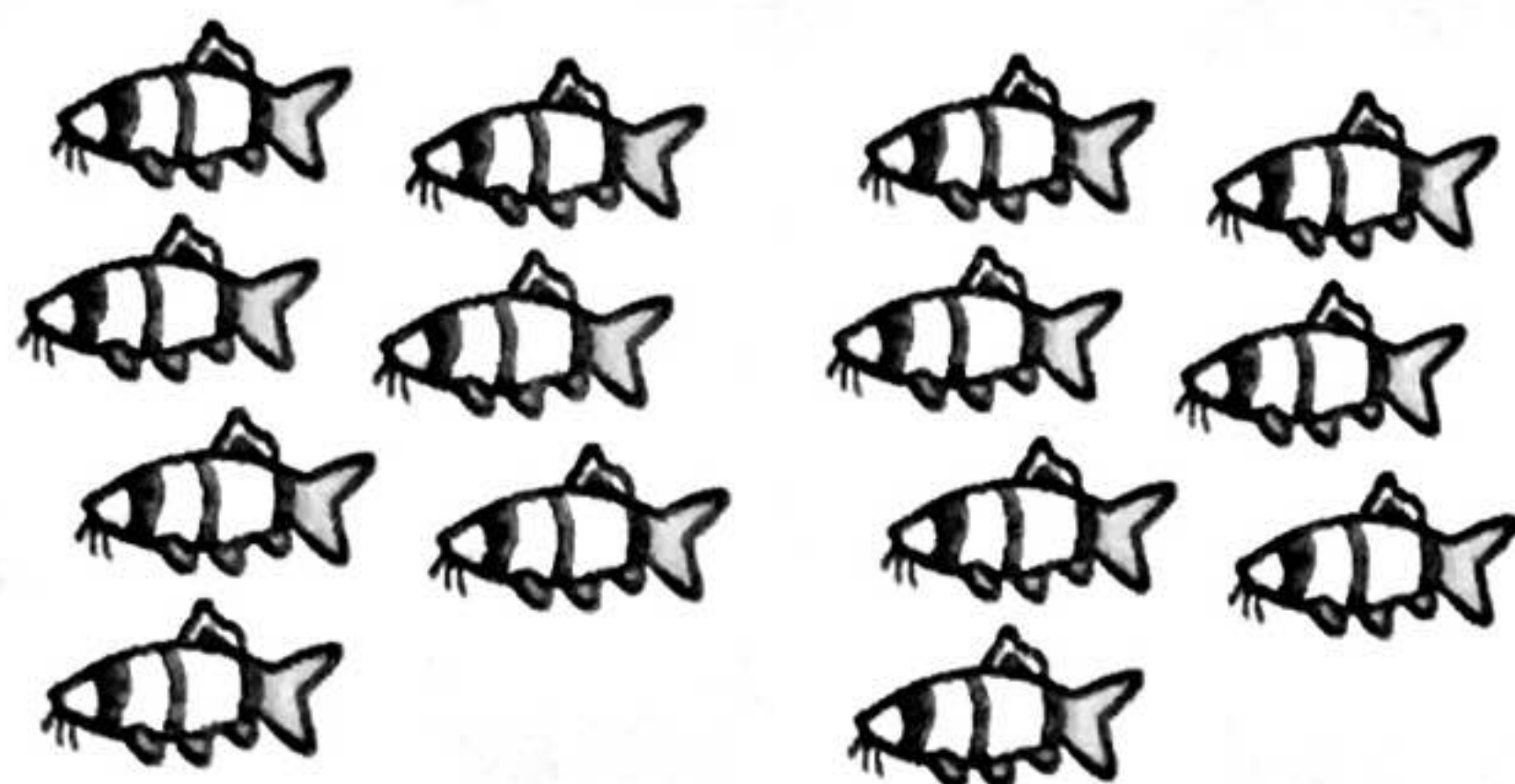
$$15 \div 3 = 5$$



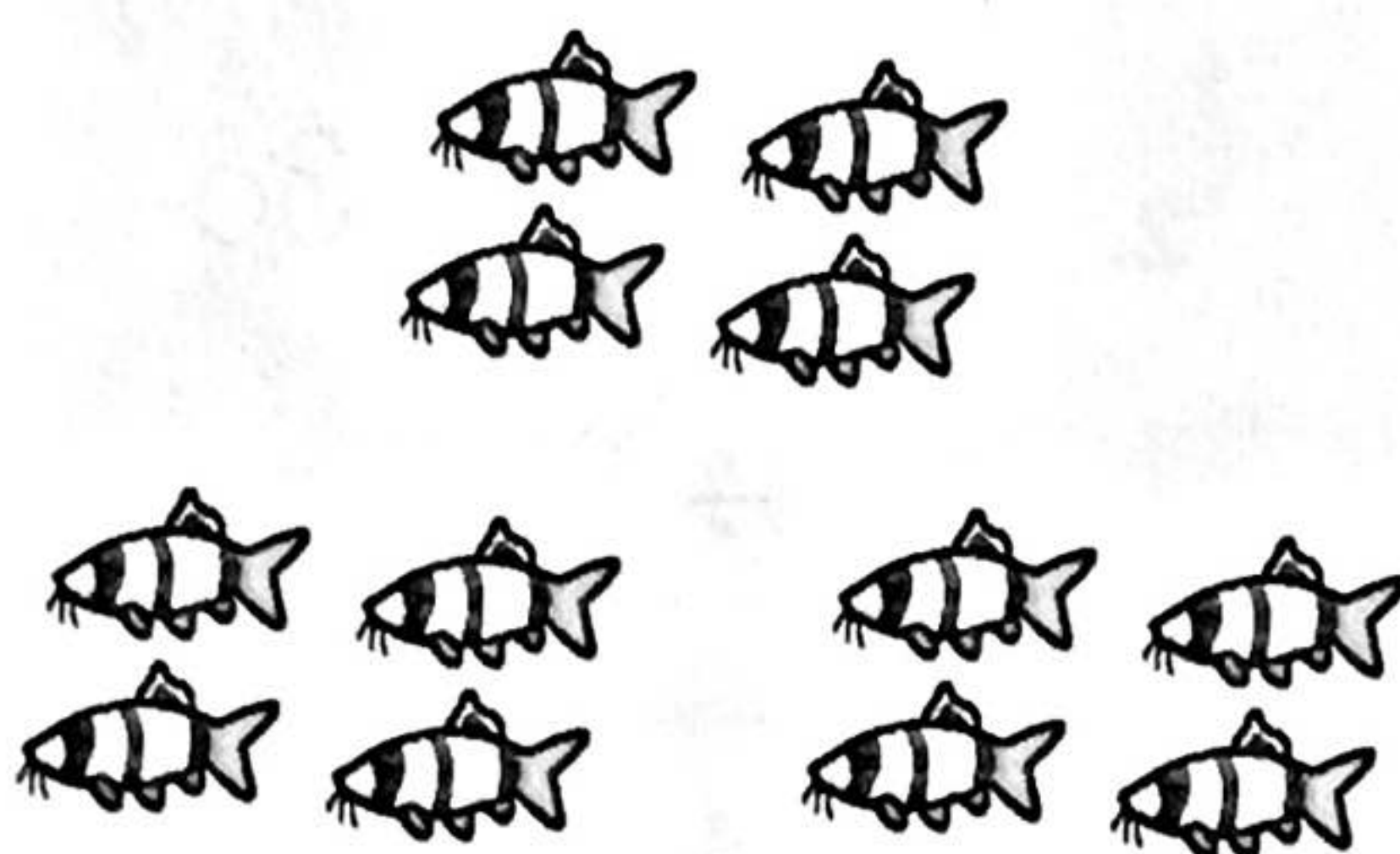
Clown Loaches

Draw circles around groups of fish to show the division fact. Then write the answer.

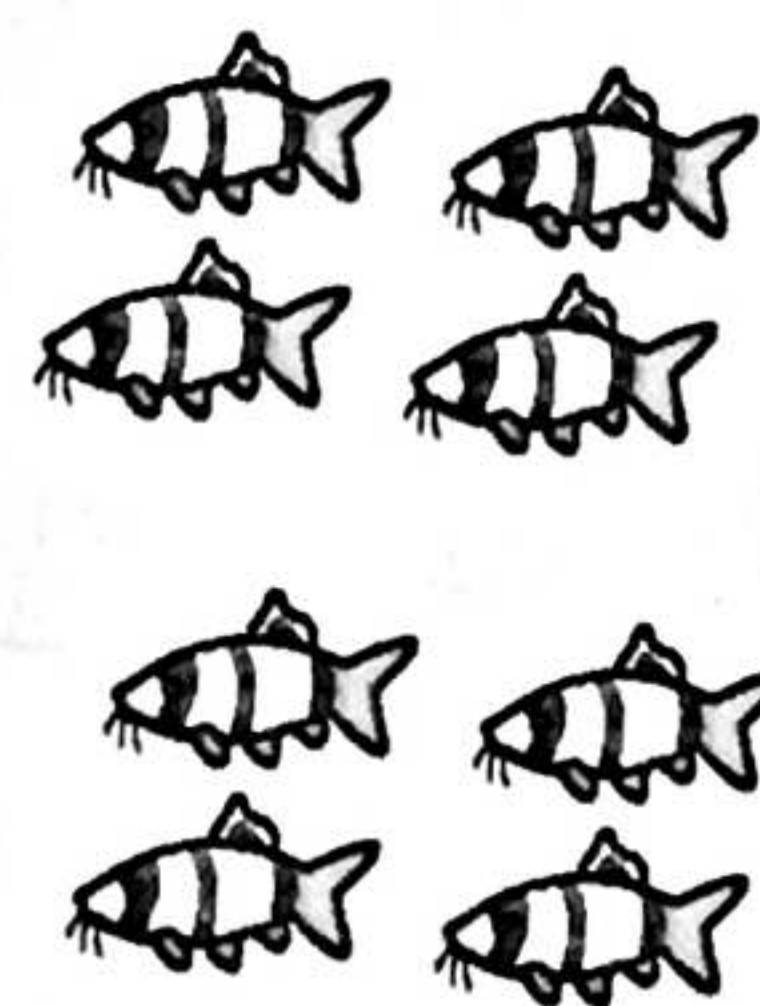
1.  $14 \div 2 = \underline{\quad}$



2.  $12 \div 3 = \underline{\quad}$



3.  $8 \div 2 = \underline{\quad}$



Practice these division facts.

Recall related multiplication facts.

4.  $2 \div 2 = \underline{\quad}$

$4 \div 2 = \underline{\quad}$

$6 \div 2 = \underline{\quad}$

$8 \div 2 = \underline{\quad}$

$10 \div 2 = \underline{\quad}$

$12 \div 2 = \underline{\quad}$

$14 \div 2 = \underline{\quad}$

$16 \div 2 = \underline{\quad}$

$18 \div 2 = \underline{\quad}$

5.  $3 \div 3 = \underline{\quad}$

$6 \div 3 = \underline{\quad}$

$9 \div 3 = \underline{\quad}$

$12 \div 3 = \underline{\quad}$

$15 \div 3 = \underline{\quad}$

$18 \div 3 = \underline{\quad}$

$21 \div 3 = \underline{\quad}$

$24 \div 3 = \underline{\quad}$

$27 \div 3 = \underline{\quad}$

Fill in the blanks.

6. If you know  $2 \times 8 = 16$ , then you know  $16 \div 2 = \underline{\quad}$ .

7. If you know  $3 \times 7 = 21$ , then you know  $21 \div \underline{\quad} = \underline{\quad}$ .

8. If you know  $2 \times 9 = \underline{\quad}$ , then you know  $\underline{\quad} \div 2 = \underline{\quad}$ .

9. If you know  $\underline{\quad} \times 3 = 3$ , then you know  $\underline{\quad} \div \underline{\quad} = \underline{\quad}$ .

10. Look at the facts above. What is a number divided by itself?  $\underline{\quad}$

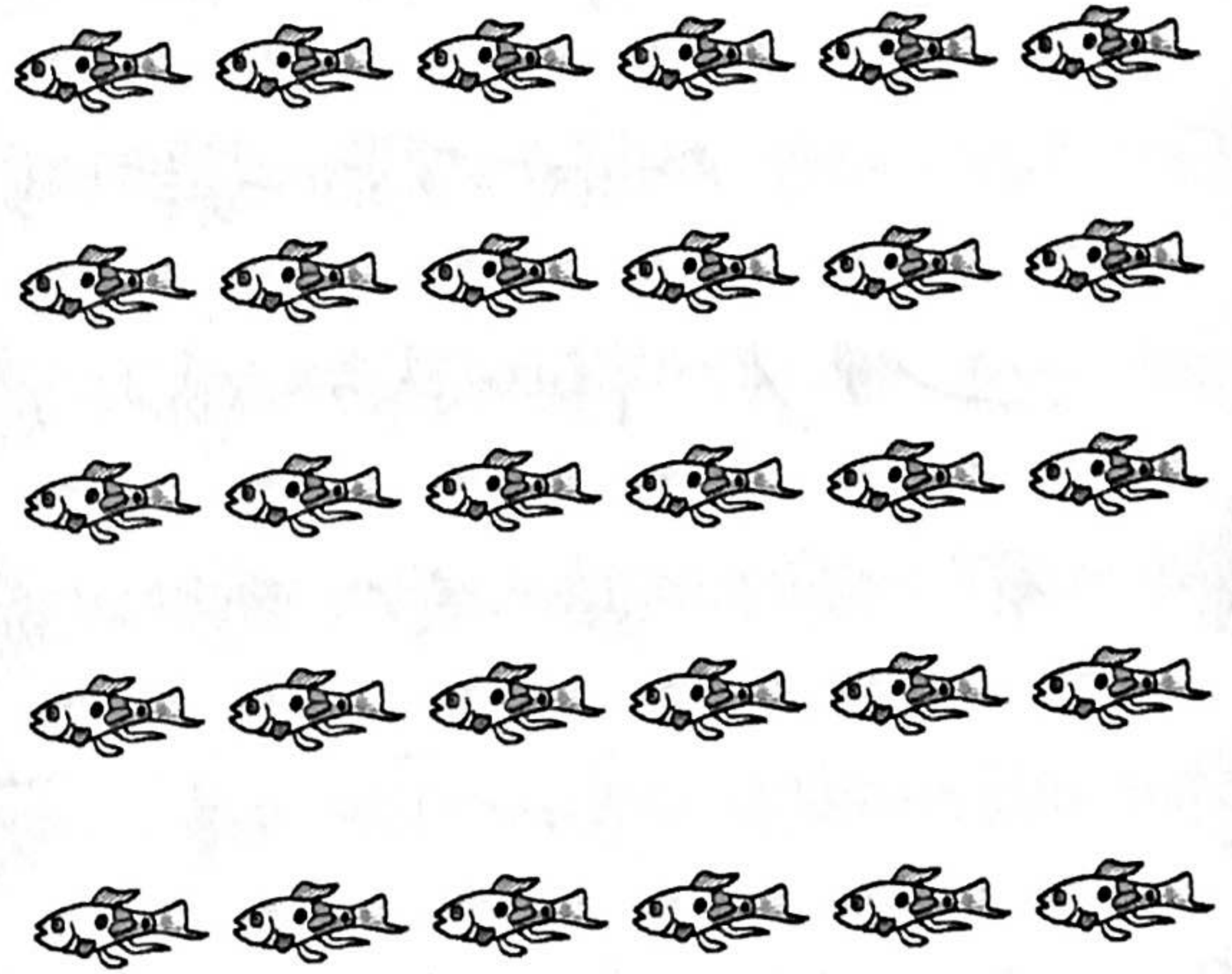
# Dividing by 4 and 5

Circle the fish to show the division fact. Write the answer.

1.  $20 \div 4 = \underline{\quad}$



2.  $30 \div 5 = \underline{\quad}$



Practice these division facts.  
Recall related multiplication facts.

3.  $4 \div 4 = \underline{\quad}$

$8 \div 4 = \underline{\quad}$

$12 \div 4 = \underline{\quad}$

$16 \div 4 = \underline{\quad}$

$20 \div 4 = \underline{\quad}$

$24 \div 4 = \underline{\quad}$

$28 \div 4 = \underline{\quad}$

$32 \div 4 = \underline{\quad}$

$36 \div 4 = \underline{\quad}$

4.  $5 \div 5 = \underline{\quad}$

$10 \div 5 = \underline{\quad}$

$15 \div 5 = \underline{\quad}$

$20 \div 5 = \underline{\quad}$

$25 \div 5 = \underline{\quad}$

$30 \div 5 = \underline{\quad}$

$35 \div 5 = \underline{\quad}$

$40 \div 5 = \underline{\quad}$

$45 \div 5 = \underline{\quad}$

Divide.

5.  $12 \div 4 = \underline{\quad}$

$10 \div 5 = \underline{\quad}$

$32 \div 4 = \underline{\quad}$

$40 \div 5 = \underline{\quad}$

$4 \div 4 = \underline{\quad}$

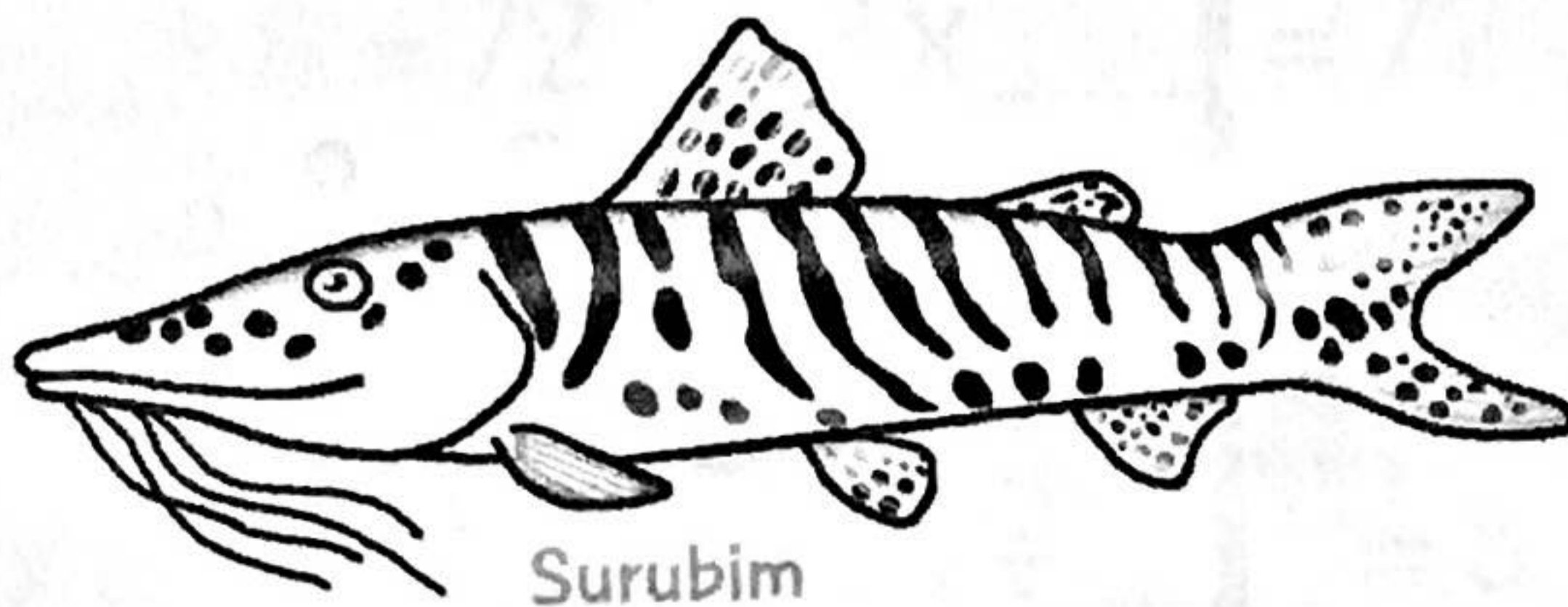
$20 \div 5 = \underline{\quad}$

$36 \div 4 = \underline{\quad}$

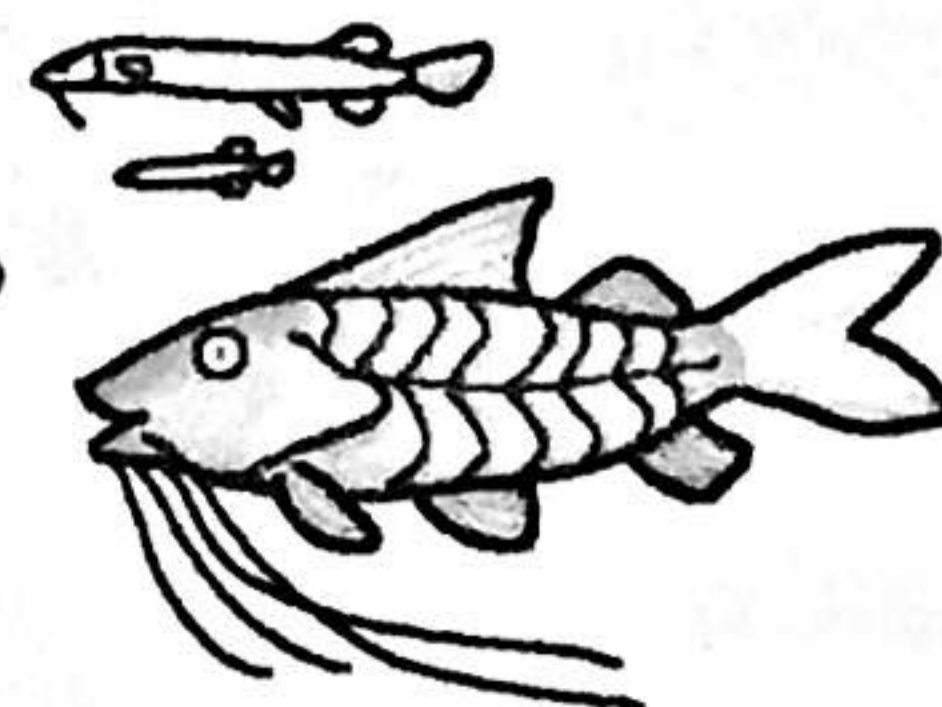
$28 \div 4 = \underline{\quad}$

$5 \div 5 = \underline{\quad}$

$24 \div 4 = \underline{\quad}$

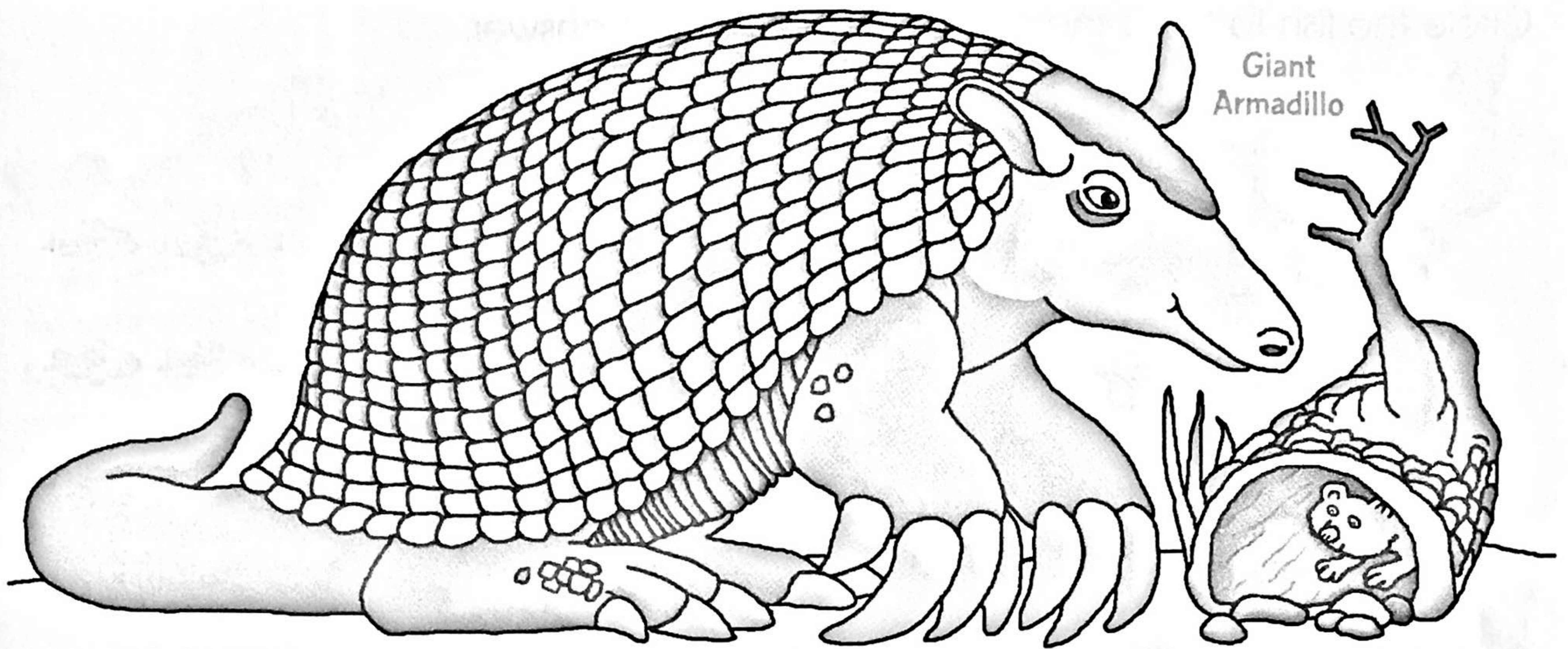


Surubim





# Dividing by 6 and 7



Practice these division facts.  
Recall related multiplication facts.

1.  $6 \div 6 = \underline{\quad}$

$12 \div 6 = \underline{\quad}$

$18 \div 6 = \underline{\quad}$

$24 \div 6 = \underline{\quad}$

$30 \div 6 = \underline{\quad}$

$36 \div 6 = \underline{\quad}$

$42 \div 6 = \underline{\quad}$

$48 \div 6 = \underline{\quad}$

$54 \div 6 = \underline{\quad}$

2.  $7 \div 7 = \underline{\quad}$

$14 \div 7 = \underline{\quad}$

$21 \div 7 = \underline{\quad}$

$28 \div 7 = \underline{\quad}$

$35 \div 7 = \underline{\quad}$

$42 \div 7 = \underline{\quad}$

$49 \div 7 = \underline{\quad}$

$56 \div 7 = \underline{\quad}$

$63 \div 7 = \underline{\quad}$

3. Find the missing numbers.

$36 \div \underline{\quad} = 6$

$\underline{\quad} \div 7 = 3$

$48 \div 6 = \underline{\quad}$

$\underline{\quad} \div 7 = 7$

$18 \div \underline{\quad} = 3$

$63 \div \underline{\quad} = 9$

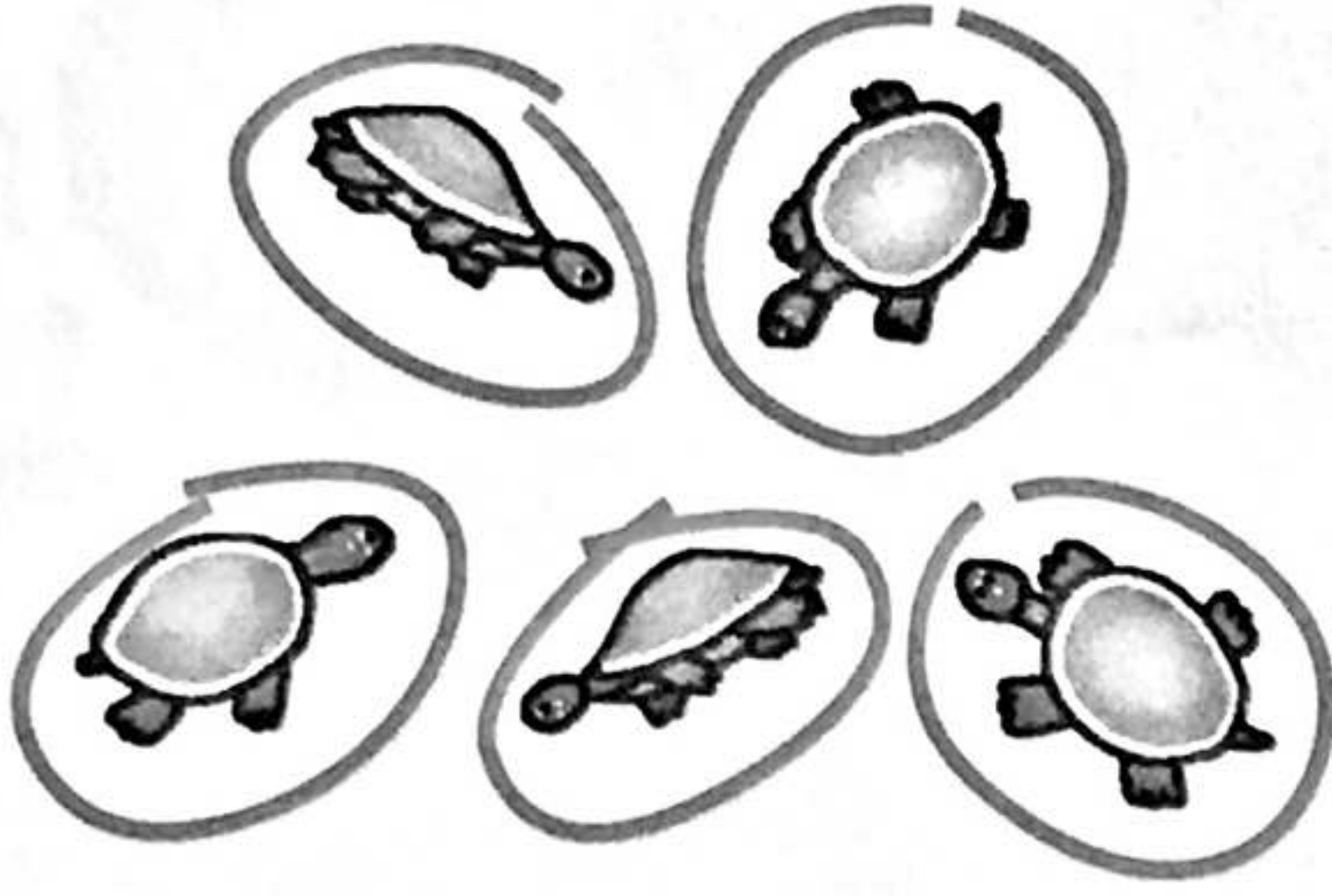
$21 \div \underline{\quad} = 7$

$\underline{\quad} \div 7 = 8$

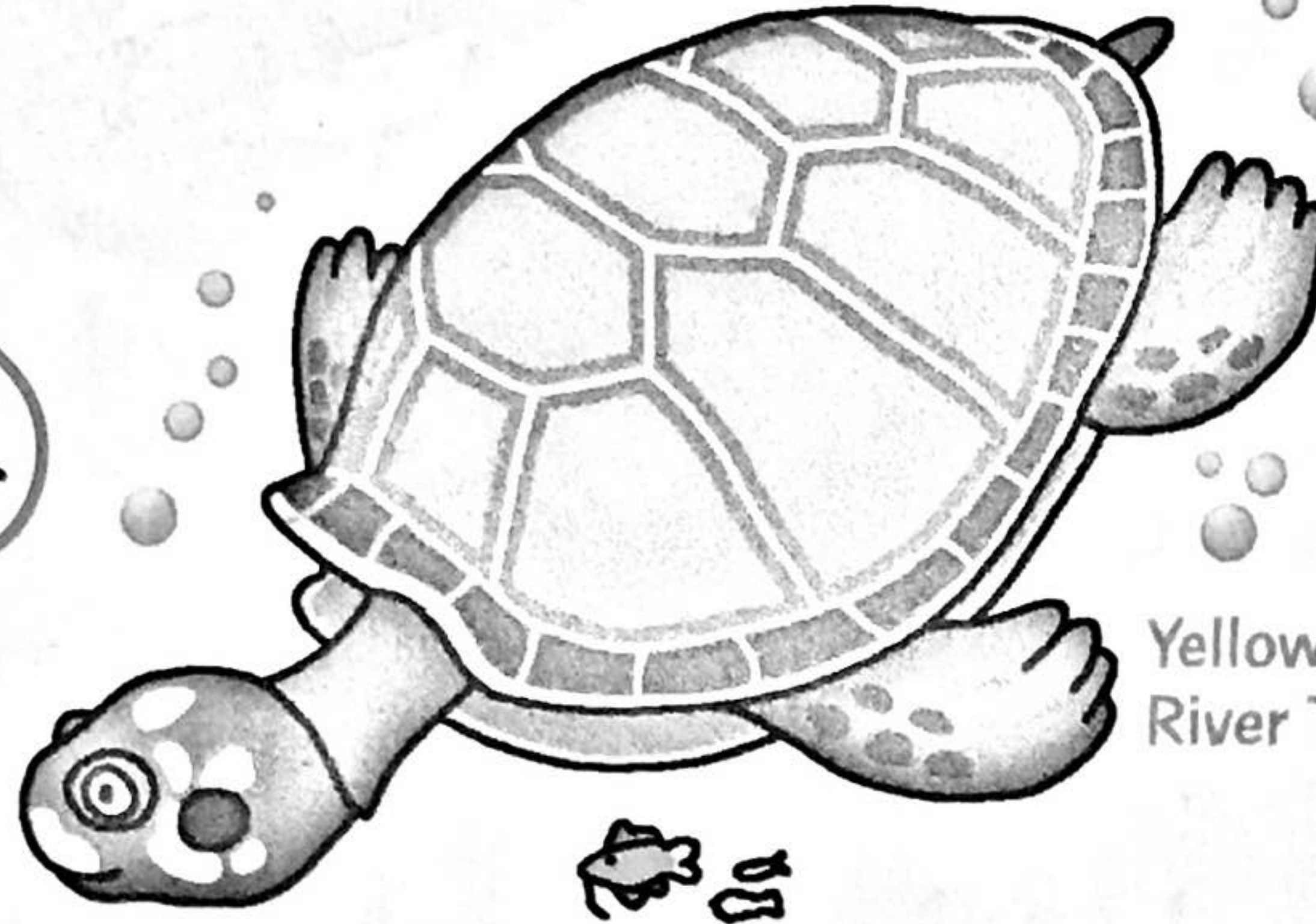
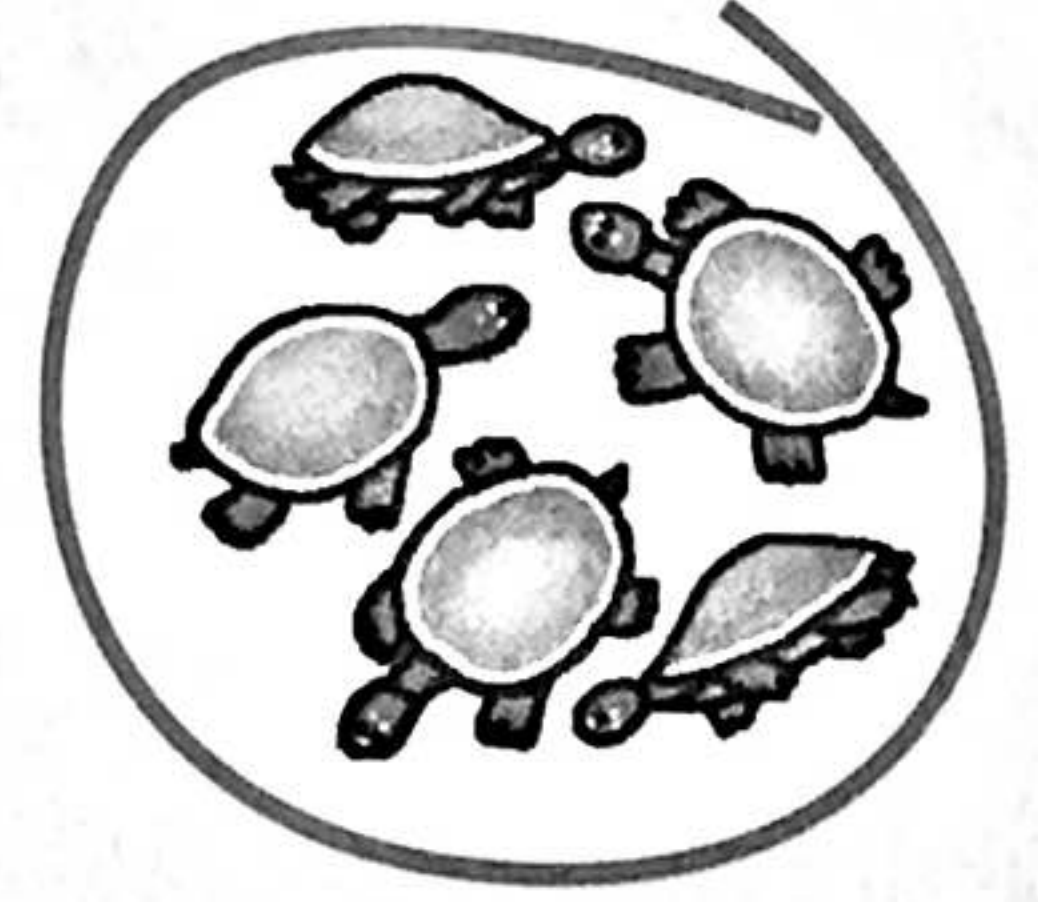
$\underline{\quad} \div 6 = 9$

# Dividing with 1 and 0

$$5 \div 5 = 1$$




$$5 \div 1 = 5$$



Yellow-Spotted River Turtle

5  divided into 5 groups

5  divided into 1 group

1  in each group

5  in the group

Divide. Match the problems to the division rules.  
The first one is done for you.

Here are some division rules:

$$4 \div 4 = \underline{1}$$

Any number divided by 1 equals that number.

$$5 \div 1 = 5$$

$$10 \div 1 = \underline{\quad}$$

$$0 \div 3 = \underline{\quad}$$

Any non-zero number divided by itself is 1.

$$5 \div 5 = 1$$

$$12 \div 12 = \underline{\quad}$$

$$7 \div 1 = \underline{\quad}$$

$$0 \div 11 = \underline{\quad}$$

$$2 \div 0 = \underline{\quad}$$

Zero divided by any non-zero number equals 0.

$$0 \div 5 = 0$$

$$25 \div 25 = \underline{\quad}$$

$$8 \div 8 = \underline{\quad}$$

$$15 \div 0 = \underline{\quad}$$

$$0 \div 9 = \underline{\quad}$$

You cannot divide by zero.  
You **cannot** do  $5 \div 0$ .

$$0 \div 25 = \underline{\quad}$$

$$6 \div 1 = \underline{\quad}$$

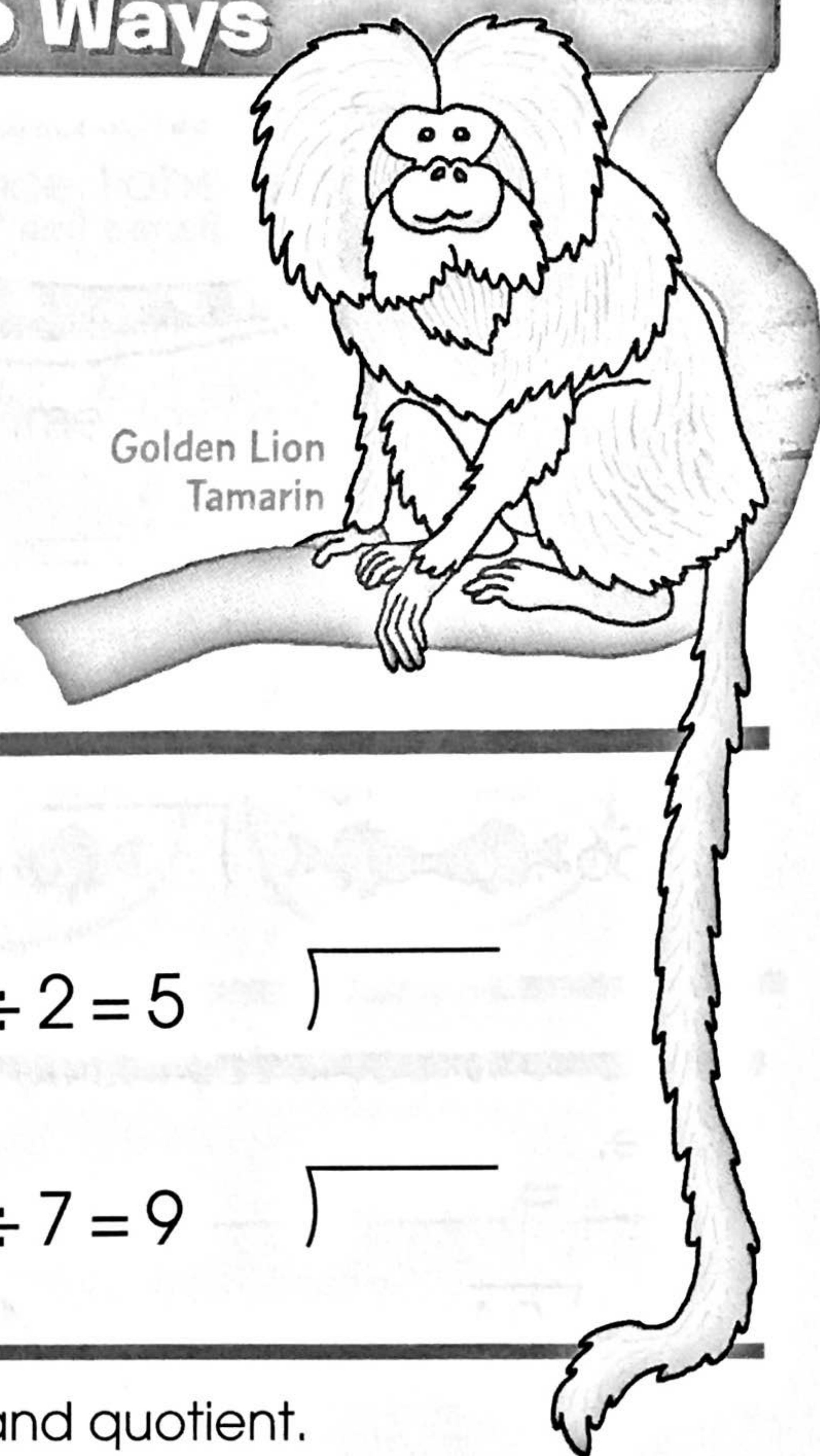
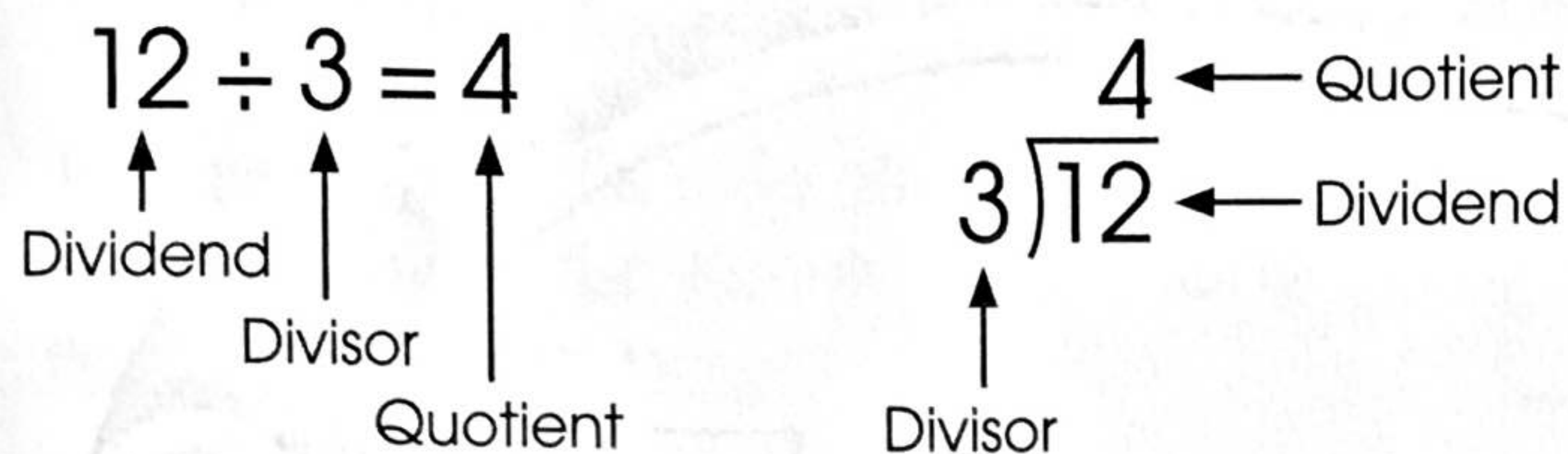
$$12 \div 1 = \underline{\quad}$$

$$0 \div 0 = \underline{\quad}$$

$$11 \div 11 = \underline{\quad}$$

# Writing Division Facts Two Ways

You can write a division problem two ways. There are three parts to a division problem.



Rewrite each division problem.

1.  $36 \div 9 = 4$        $\overline{\hspace{2cm}}$

2.  $10 \div 2 = 5$        $\overline{\hspace{2cm}}$

3.  $56 \div 8 = 7$        $\overline{\hspace{2cm}}$

4.  $63 \div 7 = 9$        $\overline{\hspace{2cm}}$

Complete each problem by finding the divisor and quotient.  
*Hint: there may be more than one answer for each problem.*

5.  $18 \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

6.  $\underline{\hspace{1cm}} \overline{)30}$

7.  $\underline{\hspace{1cm}} \overline{)45}$

8.  $54 \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

9.  $72 \div \underline{\hspace{1cm}} = \underline{\hspace{1cm}}$

10.  $\underline{\hspace{1cm}} \overline{)7}$

Divide.

11.  $36 \div 4 = \underline{\hspace{1cm}}$

12.  $6 \overline{)42}$

13.  $27 \div 3 = \underline{\hspace{1cm}}$

14.  $7 \overline{)63}$

15.  $56 \div 8 = \underline{\hspace{1cm}}$

16.  $9 \overline{)81}$

17.  $8 \overline{)8}$

18.  $40 \div 5 = \underline{\hspace{1cm}}$

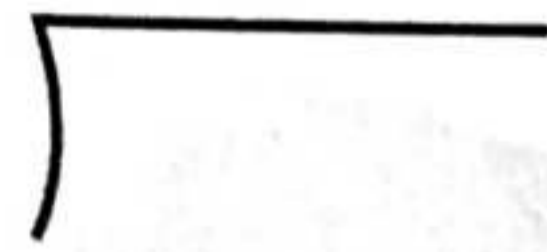
19.  $6 \overline{)0}$

# Division Facts Review

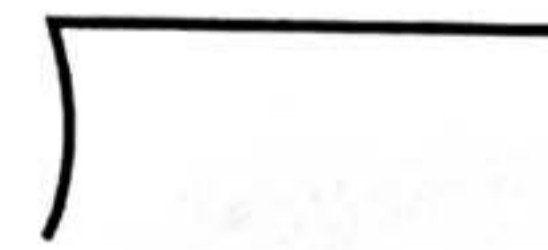
Twin-Barred Tree Snake

Rewrite each division problem.

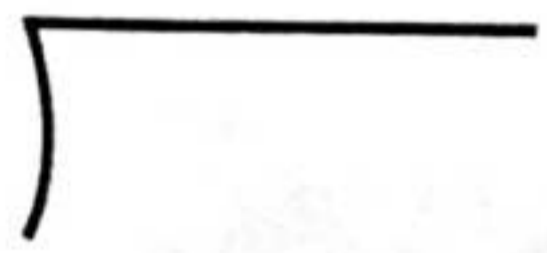
1.  $81 \div 9 = 9$



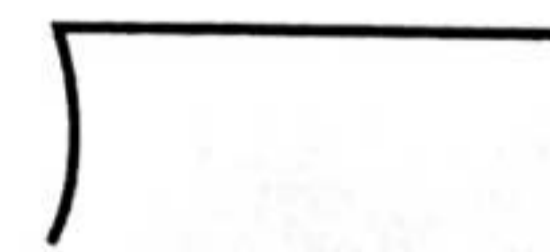
2.  $8 \div 2 = 4$



3.  $56 \div 8 = 7$



4.  $14 \div 7 = 2$



Divide.

5.  $3 \overline{)24}$

6.  $6 \overline{)42}$

7.  $7 \overline{)49}$

8.  $2 \overline{)20}$

9.  $9 \overline{)90}$

10.  $5 \overline{)35}$

11.  $4 \overline{)4}$

12.  $8 \overline{)64}$

# Multiplication and Division Word Problems

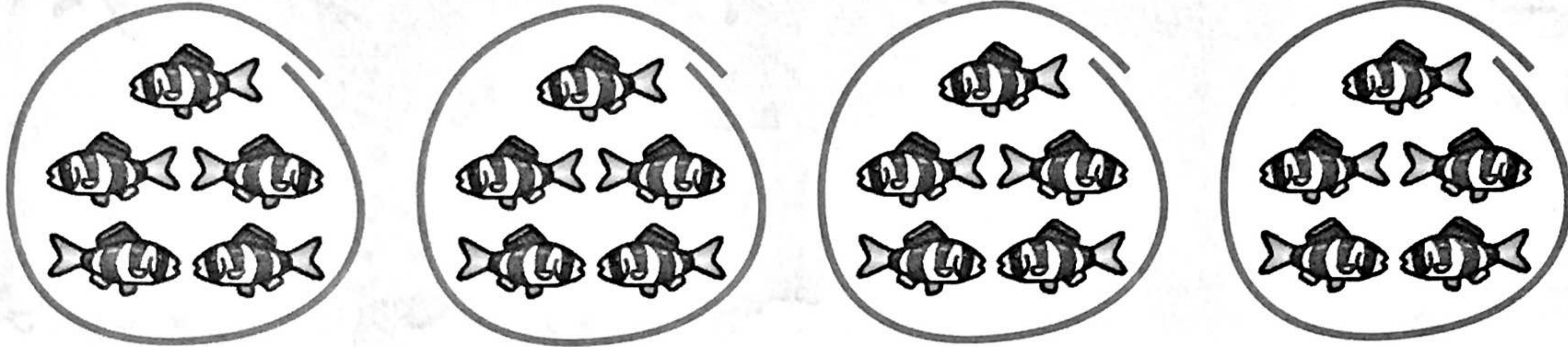
To solve division problems, look for clue words like **how many groups** or **how many in each group**.

Write and solve a number sentence. Label the answer.

Joshua has 20 fish. He divided them equally into 4 fish bowls. How many fish are in each bowl?

$$\underline{20} \div \underline{4} = \underline{5}$$

5 fish



Write and solve a number sentence for each problem. Label your answer.

1. Joshua has 24 Brazil nuts that he has to divide among 6 friends. How many nuts will each friend get?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

2. Joshua and his two friends each bought 8 bananas. How many bananas did all 3 of them buy?

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

3. Joshua put 6 stickers in each row on an album page. If there are 7 rows on each page, what is the total number of stickers on each page?

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$

4. Joshua has 9 toy boats. He put an equal number of them into 3 different boxes. How many boats are in each box?

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

# Combining Multiplication and Division

Here's a fun activity for you using both multiplication and division. Multiply and/or divide the first four numbers in order to make the fifth number. You may want to use a calculator.

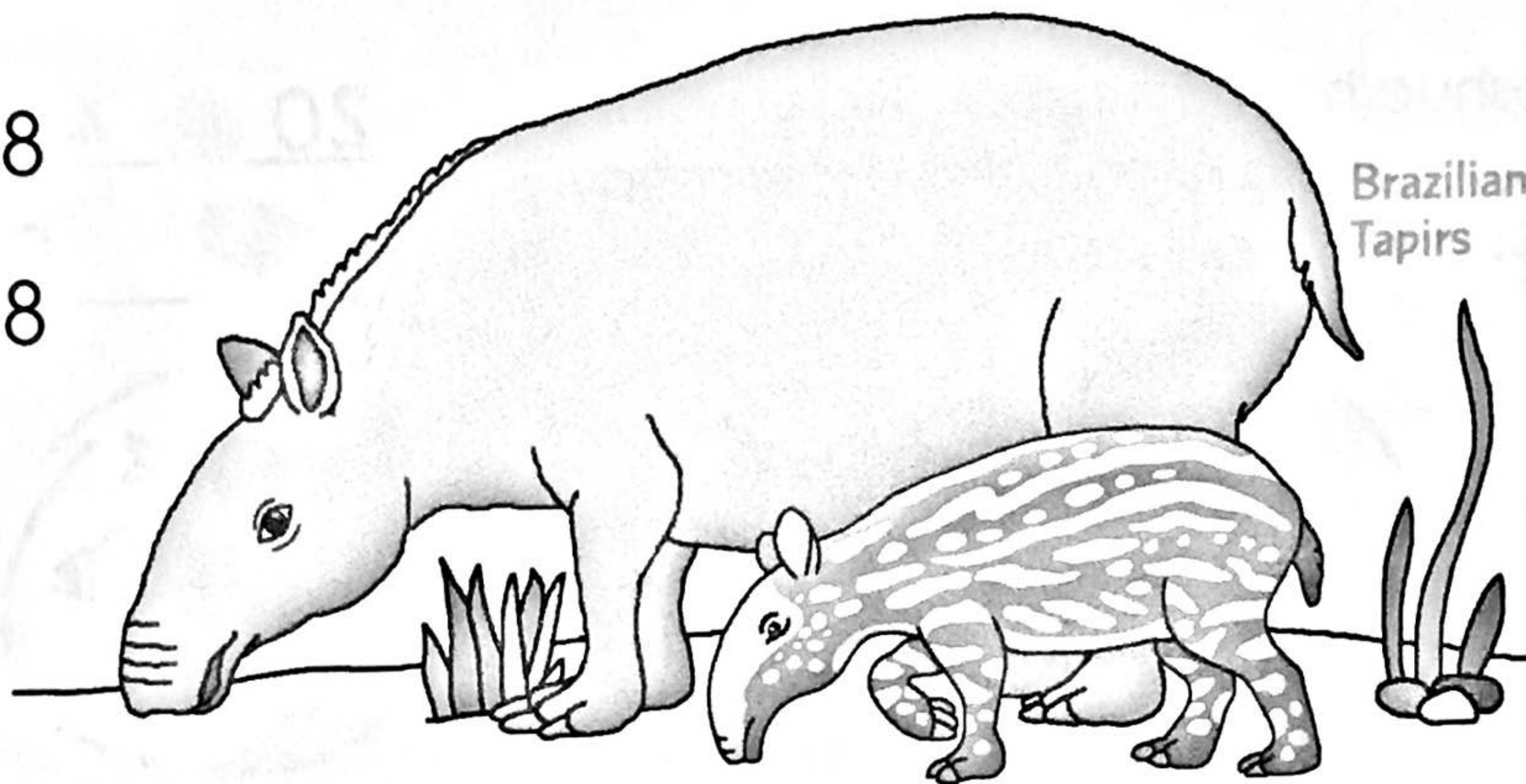
$$9 \circ 9 \circ 4 \circ 2 = 8$$

$$9 \div 9 \times 4 \times 2 = 8$$

$$1 \times 4$$

$$4 \times 2$$

8



Your turn!

1.  $6 \circ 5 \circ 3 \circ 2 = 5$

2.  $10 \circ 5 \circ 4 \circ 2 = 4$

3.  $49 \circ 7 \circ 6 \circ 6 = 7$

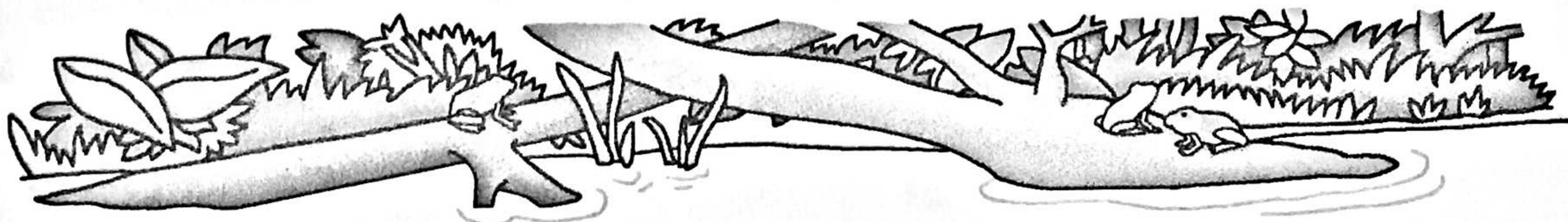
4.  $81 \circ 9 \circ 3 \circ 6 = 18$

5.  $2 \circ 2 \circ 2 \circ 2 = 1$

6.  $64 \circ 8 \circ 8 \circ 1 = 1$

7.  $8 \circ 5 \circ 4 \circ 3 = 30$

8.  $24 \circ 8 \circ 9 \circ 3 = 9$

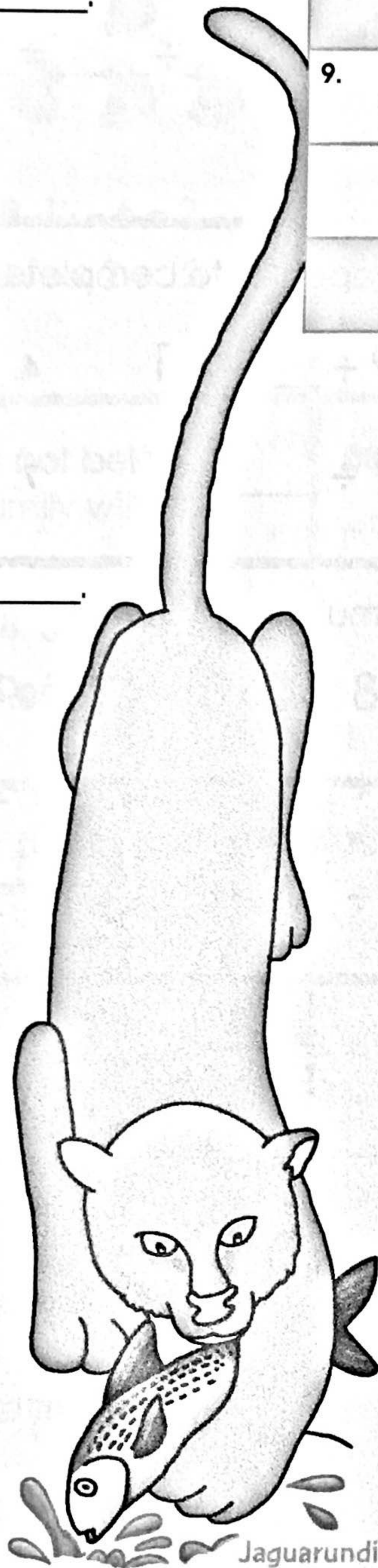


# Multiplication and Division Puzzle

Complete the problems.  
Then write the numbers in the puzzle.

## Across

1. 5 groups of 8 is \_\_\_\_\_.
2.  $7 \times 8 =$  \_\_\_\_\_
3.  $27 \div 9 =$  \_\_\_\_\_
4.  $8 \times$  \_\_\_\_\_  $= 64$
5. \_\_\_\_\_  $\div 6 = 4$
6. 9 groups of 4 is \_\_\_\_\_.
7.  $2 \times 7 =$  \_\_\_\_\_
8.  $5 \times 4 =$  \_\_\_\_\_
9.  $9 \times 8 =$  \_\_\_\_\_
10.  $6 \div$  \_\_\_\_\_  $= 6$
11. \_\_\_\_\_  $\times 5 = 30$
12.  $4 \times 7 =$  \_\_\_\_\_
13. \_\_\_\_\_  $\div 4 = 6$
14.  $8 \times 5 =$  \_\_\_\_\_
15. \_\_\_\_\_  $\div 7 = 4$



1.			2.			3.
4.		5.			6.	
	7.			8.		
9.			10.			11.
		12.			13.	
	14.			15.		

## Down

1.  $8 \times 6 =$  \_\_\_\_\_
2. \_\_\_\_\_  $\div 6 = 9$
3.  $6 \times 6 =$  \_\_\_\_\_
5. \_\_\_\_\_  $\div 8 = 3$
6. 5 groups of 6 is \_\_\_\_\_.
7. \_\_\_\_\_  $\div 3 = 4$
9. \_\_\_\_\_  $\div 8 = 9$
10. 3 groups of 6 is \_\_\_\_\_.
11. \_\_\_\_\_  $\div 8 = 8$
12.  $5 \times 4 =$  \_\_\_\_\_
13.  $4 \times 7 =$  \_\_\_\_\_

# What I Learned about Division

1. Write a multiplication and division sentence for the picture.



$$\underline{\quad} \times \underline{\quad} = \underline{\quad}$$



$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$



Think of multiplication and division properties to complete each problem.

2.  $3 \times 8 = \underline{\quad} \times 3$

3.  $9 \div \underline{\quad} = 1$

4.  $\underline{\quad} \times 5 = 0$

5.  $\underline{\quad} \div 8 = 0$

6.  $7 \div \underline{\quad} = 7$

7.  $4 \div \underline{\quad} = \text{cannot do}$

Write related division facts for each multiplication fact.

8.  $6 \times 9 = 54$

9.  $8 \times 1 = 8$

10.  $7 \times 5 = 35$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

$$\underline{\quad} \div \underline{\quad} = \underline{\quad}$$

Divide.

11.  $6 \overline{)48}$

12.  $30 \div 5 = \underline{\quad}$

13.  $7 \overline{)56}$

14.  $9 \div 1 = \underline{\quad}$

15.  $8 \overline{)72}$

16.  $36 \div 9 = \underline{\quad}$

17.  $0 \div 6 = \underline{\quad}$

18.  $7 \times 6 = \underline{\quad}$

19.  $6 \div 6 = \underline{\quad}$

20.  $8 \overline{)64}$

21.  $81 \div 9 = \underline{\quad}$

22.  $0 \div 0 = \underline{\quad}$

23.  $7 \overline{)63}$

24.  $3 \div 0 = \underline{\quad}$

25.  $6 \overline{)54}$

26.  $9 \overline{)45}$



Circle the answer.

27. Which number sentence does **not** tell about this picture?



- A.  $12 \div 6 = 2$       B.  $12 - 6 = 2$   
C.  $12 \div 2 = 6$       D.  $6 \times 2 = 12$

28. Joshua put 36 shells into 4 equal groups. Which number sentence would you use to find how many shells are in each group?

- A.  $4 \times 36 = \underline{\quad}$   
B.  $4 + 36 = \underline{\quad}$   
C.  $36 \div 4 = \underline{\quad}$   
D.  $36 - 4 = \underline{\quad}$

29. Which fact does **not** belong in the same fact family with the other choices?

- A.  $5 \times 6 = 30$       B.  $30 \div 5 = 6$   
C.  $30 \times 5 = 6$       D.  $30 \div 6 = 5$

30. Which option makes this number sentence true?

$$8 \div 0 = \underline{\quad}$$

- A. 0    B. 8    C. 80    D. cannot do

31. Which word names the part of this problem pointed to by the arrow?

$$6 \overline{)24} \leftarrow$$

- A. quotient      B. product  
C. divisor      D. dividend

32. Which number makes this number sentence true?

$$9 \div 3 = \underline{\quad}$$

- A. 0    B. 1    C. 3    D. 27

33. Which number makes this number sentence true?

$$7 \div \underline{\quad} = 7$$

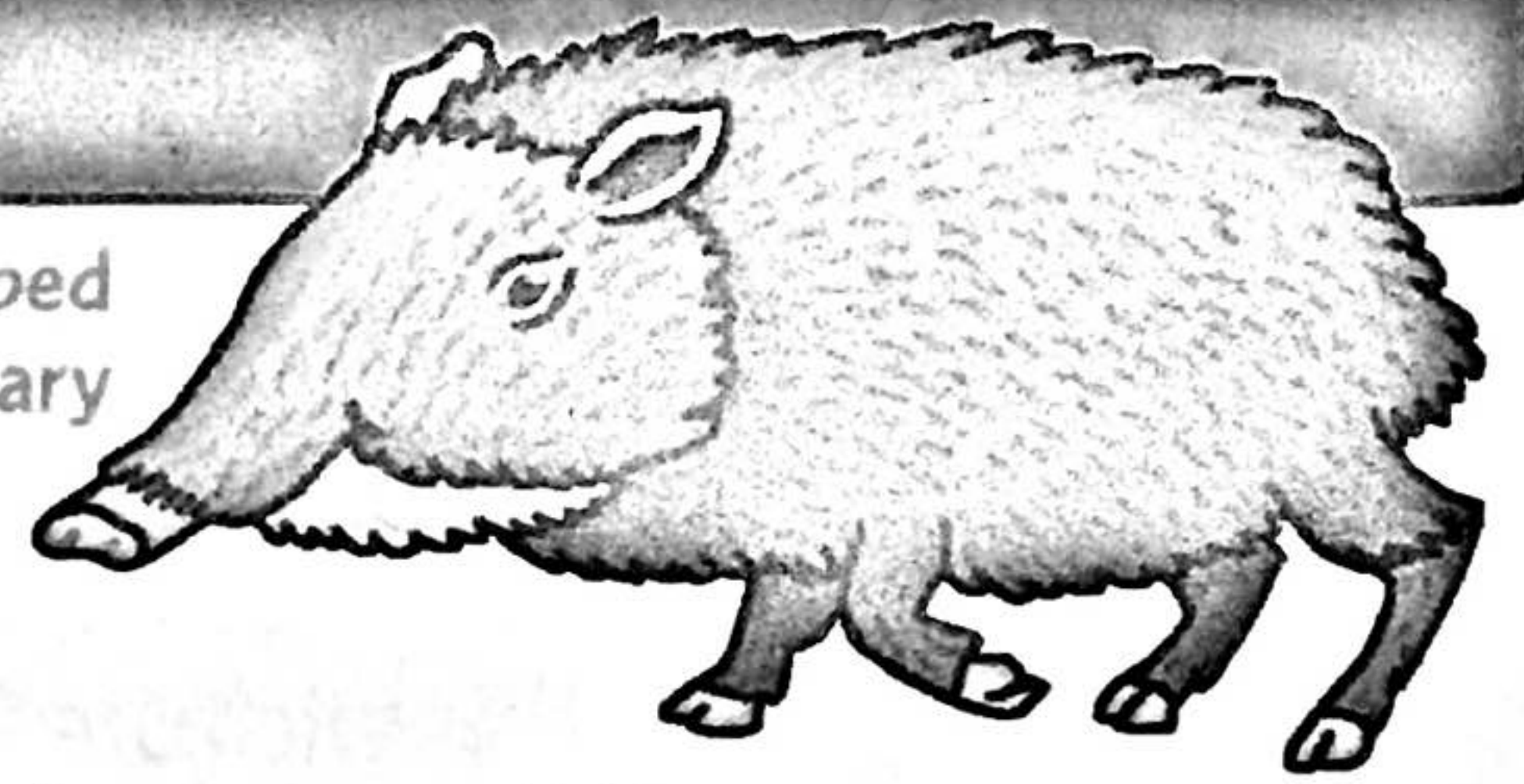
- A. 0    B. 1    C. 7    D. 49

34. Which of the following number sentences cannot be done?

- A.  $0 \div 4$       B.  $4 \div 4$   
C.  $4 \div 1$       D.  $4 \div 0$

# Multiplication Patterns

White-Lipped Peccary



If you know your multiplication facts, you can find these products mentally. Look for a pattern.

$3 \times 4 = 12$

$3 \times 4 \text{ ones} = 12 \text{ ones}$

$3 \times 40 = 120$

$3 \times 4 \text{ tens} = 12 \text{ tens}$

$3 \times 400 = 1,200$

$3 \times 4 \text{ hundreds} = 12 \text{ hundreds}$

Practice the facts.

1.  $8 \times 1 = \underline{\quad}$

$8 \times 10 = \underline{\quad}$

$8 \times 100 = \underline{\quad}$

2.  $7 \times 9 = \underline{\quad}$

$7 \times 90 = \underline{\quad}$

$7 \times 900 = \underline{\quad}$

Fill in the blanks.

3.  $6 \times 1 \text{ ten} = \underline{6} \text{ tens} = \underline{60}$

4.  $4 \times 4 \text{ hundreds} = \underline{\quad} \text{ hundreds} = \underline{\quad}$

5.  $3 \times 9 \text{ hundreds} = \underline{\quad} \text{ hundreds} = \underline{\quad}$

6.  $8 \times 7 \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$

7.  $5 \times 8 \text{ tens} = \underline{\quad} \text{ tens} = \underline{\quad}$

8.  $6 \times 9 \text{ hundreds} = \underline{\quad} \text{ hundreds} = \underline{\quad}$

Multiply mentally.

9.  $7 \times 100 = \underline{\quad}$

10.  $4 \times 90 = \underline{\quad}$

11.  $3 \times 500 = \underline{\quad}$

12.  $40 \times 7 = \underline{\quad}$

13.  $300 \times 8 = \underline{\quad}$

14.  $9 \times 50 = \underline{\quad}$

15.  $600 \times 7 = \underline{\quad}$

16.  $8 \times 50 = \underline{\quad}$

17.  $8 \times 900 = \underline{\quad}$

18. Complete the chart.

x	10	30	80	100	400	900
5						
7				700		
8			640			

# Estimating Products

Use rounding to estimate products.

Joshua has 3 tanks of fish.  
There are 37 fish in each tank.  
About how many fish is this?

If the number is 5 or more, round up.  
If the number is 4 or less, round down.

$$3 \times 37$$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 3 \times 40 = 120 \end{array}$$

Round 37 to 40.

There are about 120 fish.

40  
39  
38  
37  
36  
35  
34  
33  
32  
31  
30

Estimate the product by rounding.

1.  $\begin{array}{r} 4 \times 62 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

2.  $\begin{array}{r} 6 \times 75 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

3.  $\begin{array}{r} 3 \times 191 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

4.  $\begin{array}{r} 637 \times 8 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

5.  $\begin{array}{r} 7 \times 213 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

6.  $\begin{array}{r} 5 \times 807 \\ \downarrow \quad \downarrow \end{array}$

\_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

Estimate the product.

7.  $3 \times 71$  \_\_\_\_\_

8.  $4 \times 795$  \_\_\_\_\_

9.  $7 \times 678$  \_\_\_\_\_

10.  $459 \times 4$  \_\_\_\_\_

11.  $2 \times 925$  \_\_\_\_\_

12.  $88 \times 6$  \_\_\_\_\_

13.  $5 \times 304$  \_\_\_\_\_

14.  $7 \times 77$  \_\_\_\_\_

15.  $605 \times 9$  \_\_\_\_\_

Solve the problem.

16. Joshua has 3 photo albums. There are 68 photographs in each album. About how many photographs are in the albums?  
\_\_\_\_\_

17. Joshua rides the bus to school. There are 42 students on each bus. About how many students are on 6 buses?  
\_\_\_\_\_

# Multiplying Two-Digit Numbers

If you know the multiplication facts, you can multiply any two numbers together.

Multiply the ones.

$$\begin{array}{r} \text{tens} \\ \text{ones} \\ 23 \\ \times 3 \\ \hline 9 \end{array}$$

Multiply the tens.

$$\begin{array}{r} \text{tens} \\ \text{ones} \\ 23 \\ \times 3 \\ \hline 69 \end{array}$$



Multiply.

1. 
$$\begin{array}{r} 14 \\ \times 2 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 12 \\ \times 4 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 23 \\ \times 2 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 33 \\ \times 3 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 24 \\ \times 2 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 11 \\ \times 7 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 32 \\ \times 3 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 10 \\ \times 4 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 13 \\ \times 2 \\ \hline \end{array}$$

Solve the problem.

10. Joshua is filling 3 pages in his journal per day. How many pages will he fill in 12 days?

\_\_\_\_\_

# Multiplying with Regrouping

Sometimes you need to regroup when you multiply.

Multiply the ones.  
Regroup.

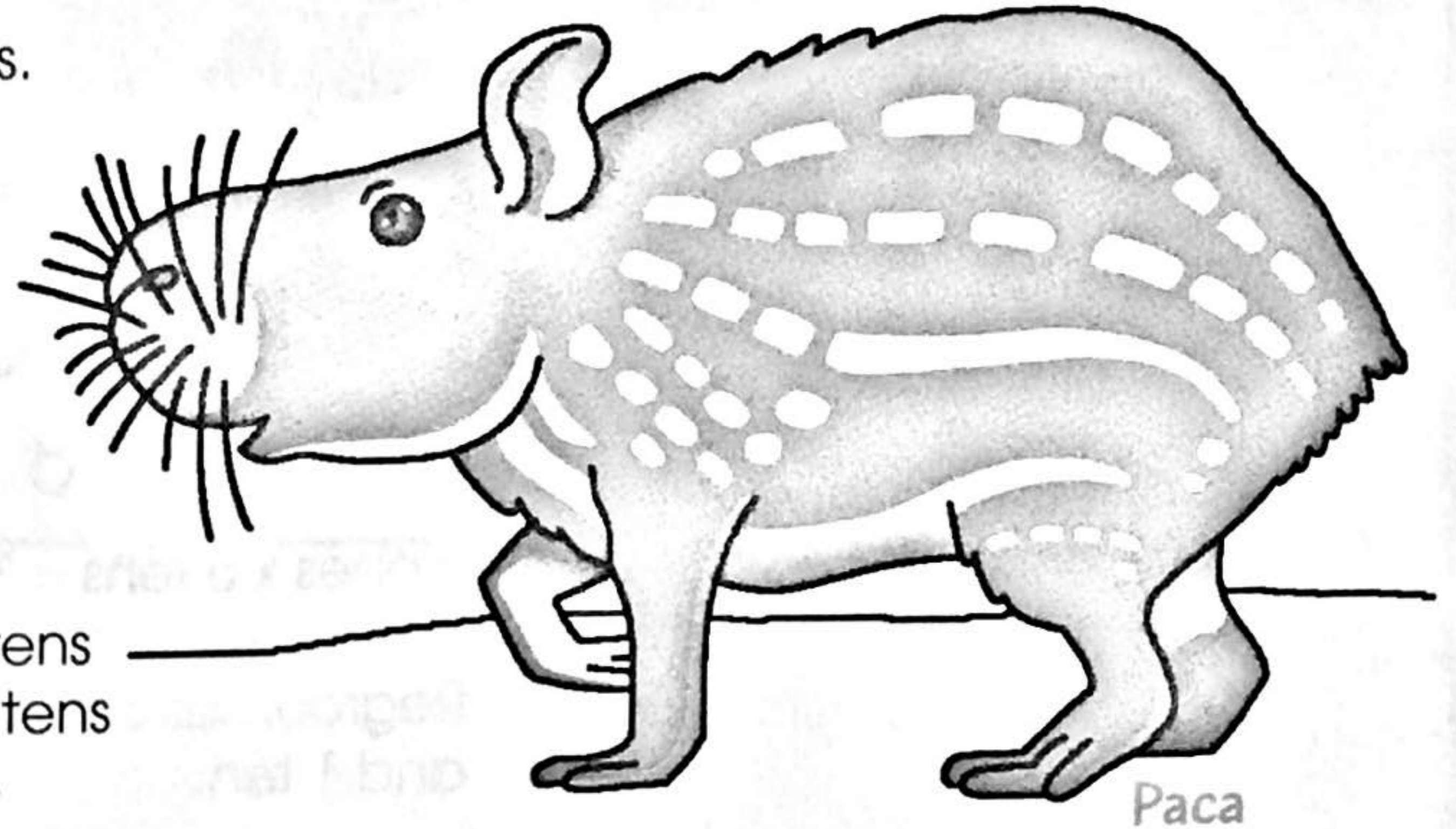
$$\begin{array}{r} 3 \\ 45 \\ \times 7 \\ \hline 5 \end{array}$$

7 ones  $\times$  5 ones = 35 ones  
Regroup as 3 tens and 5 ones.

Multiply the tens.  
Add regrouped ones.

$$\begin{array}{r} 3 \\ 45 \\ \times 7 \\ \hline 315 \end{array}$$

7 ones  $\times$  4 tens = 28 tens  
28 tens + 3 tens = 31 tens  
31 tens is 3 hundreds  
and 1 ten.



Multiply.

1.  $\begin{array}{r} 42 \\ \times 6 \\ \hline \end{array}$

2.  $\begin{array}{r} 98 \\ \times 2 \\ \hline \end{array}$

3.  $\begin{array}{r} 74 \\ \times 4 \\ \hline \end{array}$

4.  $\begin{array}{r} 34 \\ \times 3 \\ \hline \end{array}$

5.  $\begin{array}{r} 78 \\ \times 2 \\ \hline \end{array}$

6.  $\begin{array}{r} 64 \\ \times 5 \\ \hline \end{array}$

7.  $\begin{array}{r} 63 \\ \times 9 \\ \hline \end{array}$

8.  $\begin{array}{r} 18 \\ \times 3 \\ \hline \end{array}$

9.  $\begin{array}{r} 55 \\ \times 5 \\ \hline \end{array}$

10.  $\begin{array}{r} 19 \\ \times 9 \\ \hline \end{array}$

11.  $\begin{array}{r} 28 \\ \times 3 \\ \hline \end{array}$

12.  $\begin{array}{r} 45 \\ \times 5 \\ \hline \end{array}$

Try these!

13.  $4 \times 2 \times 3 = \underline{\quad}$

14.  $5 \times 2 \times 8 = \underline{\quad}$

15.  $6 \times 2 \times 3 = \underline{\quad}$

# Multiplying Three-Digit Numbers

Multiply the ones.  
Regroup.

$$\begin{array}{r} \phantom{0}^1 \\ 452 \\ \times \phantom{0}6 \\ \hline \phantom{00}2 \end{array}$$

6 ones  $\times$  2 ones = 12 ones  
Regroup as 1 ten and 2 ones.

Multiply the tens.  
Add regrouped ones.  
Regroup.

$$\begin{array}{r} \phantom{00}^3 \phantom{0}^1 \\ 452 \\ \times \phantom{0}6 \\ \hline \phantom{000}12 \end{array}$$

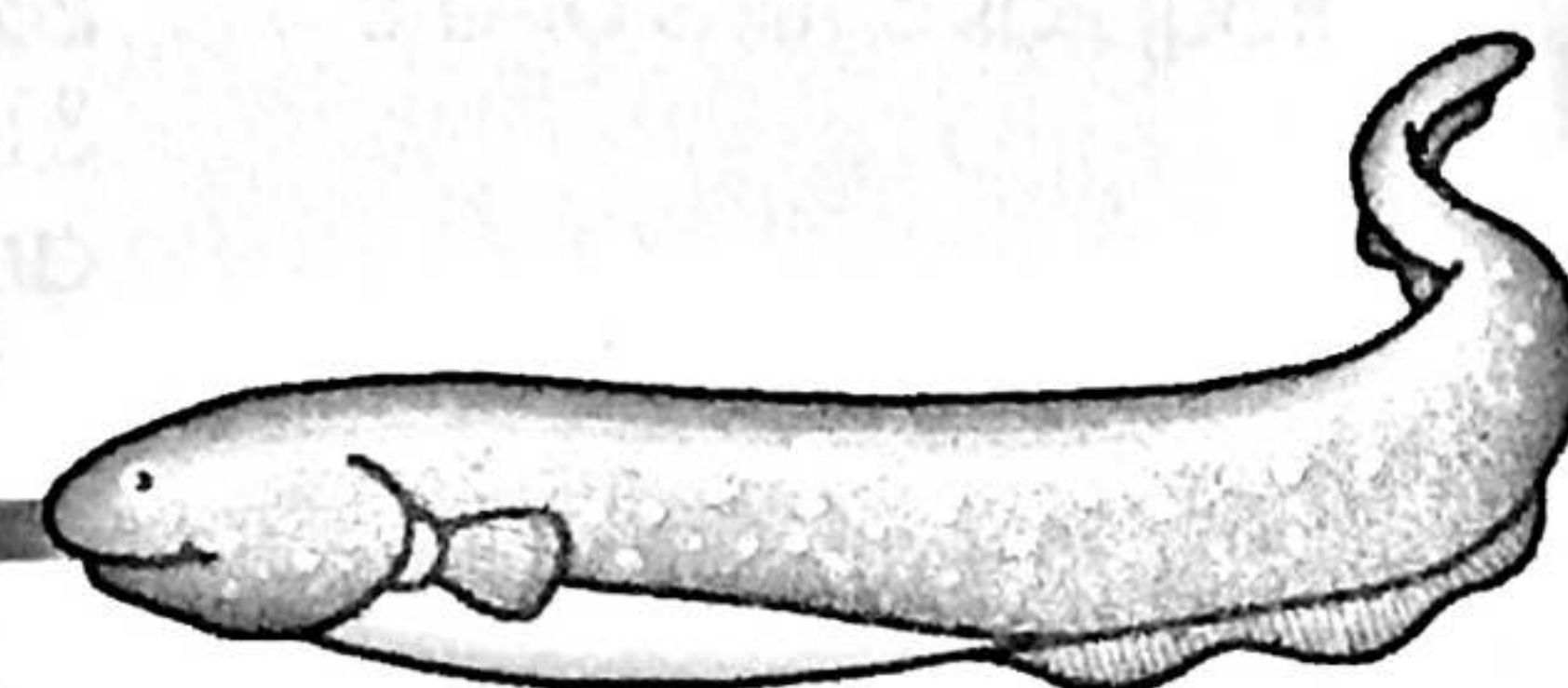
6 ones  $\times$  5 tens = 30 tens  
30 tens + 1 ten = 31 tens  
Regroup as 3 hundreds  
and 1 ten.

Multiply the hundreds.  
Add regrouped tens.

$$\begin{array}{r} \phantom{000}^3 \phantom{0}^1 \\ 452 \\ \times \phantom{0}6 \\ \hline \phantom{0000}2,712 \end{array}$$

6 ones  $\times$  4 hundreds = 24 hundreds  
24 hundreds + 3 hundreds = 27 hundreds

Estimate the product:  $6 \times 452$  is about  $6 \times 500 = 3,000$



Electric Eel

Multiply. Estimate to check your answer.

1.  $\begin{array}{r} 126 \\ \times 4 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

2.  $\begin{array}{r} 472 \\ \times 2 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

3.  $\begin{array}{r} 975 \\ \times 4 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

4.  $\begin{array}{r} 134 \\ \times 7 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

5.  $\begin{array}{r} 813 \\ \times 3 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

6.  $\begin{array}{r} 144 \\ \times 8 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

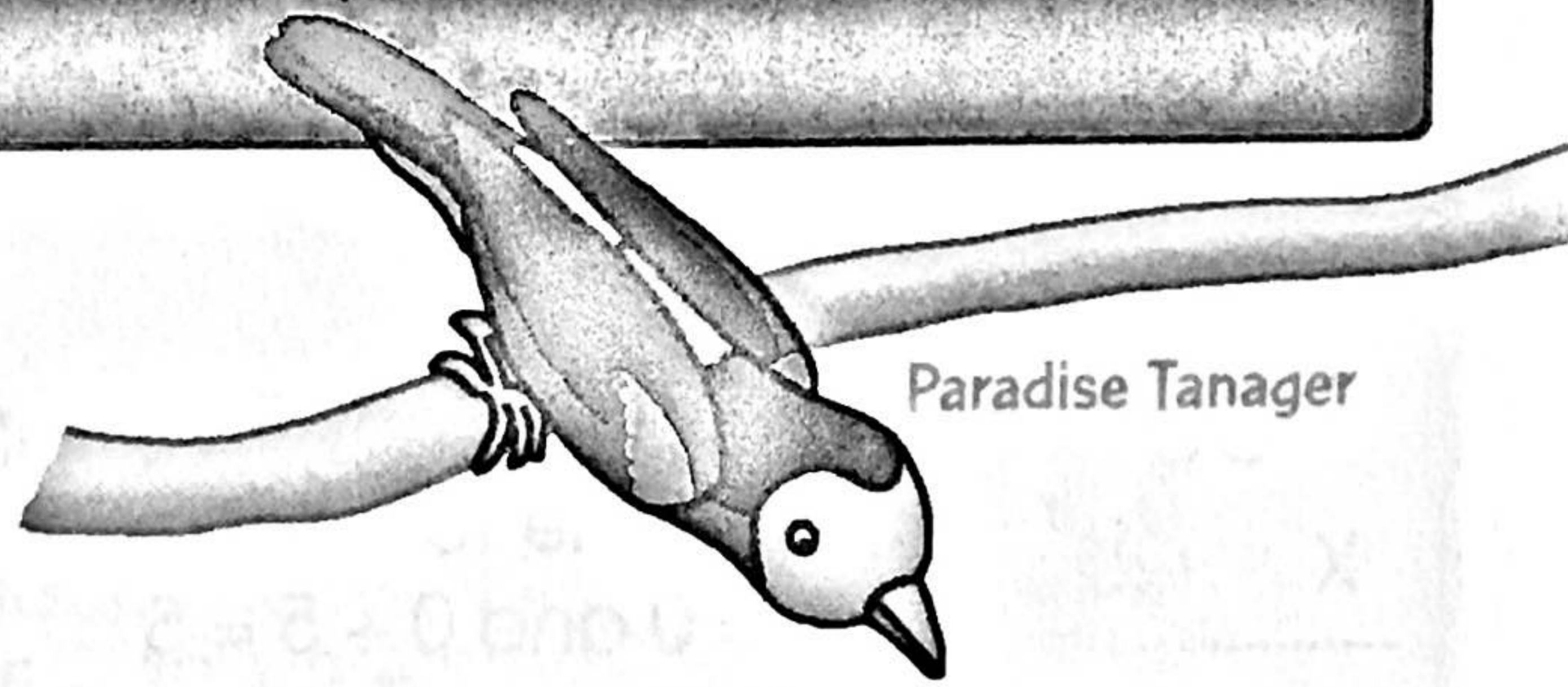
7.  $\begin{array}{r} 135 \\ \times 2 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

8.  $\begin{array}{r} 292 \\ \times 5 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

9.  $\begin{array}{r} 224 \\ \times 9 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \phantom{00} \\ \times \phantom{00} \\ \hline \end{array}$

# More Multiplication

Multiply. Estimate to check your answer.



Paradise Tanager

1. 
$$\begin{array}{r} 78 \\ \times 4 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 56 \\ \times 8 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 26 \\ \times 9 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 213 \\ \times 4 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 183 \\ \times 7 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 491 \\ \times 6 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 169 \\ \times 3 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 555 \\ \times 4 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 732 \\ \times 5 \\ \hline \end{array}$$
 Estimate 
$$\begin{array}{r} \times \\ \hline \end{array}$$

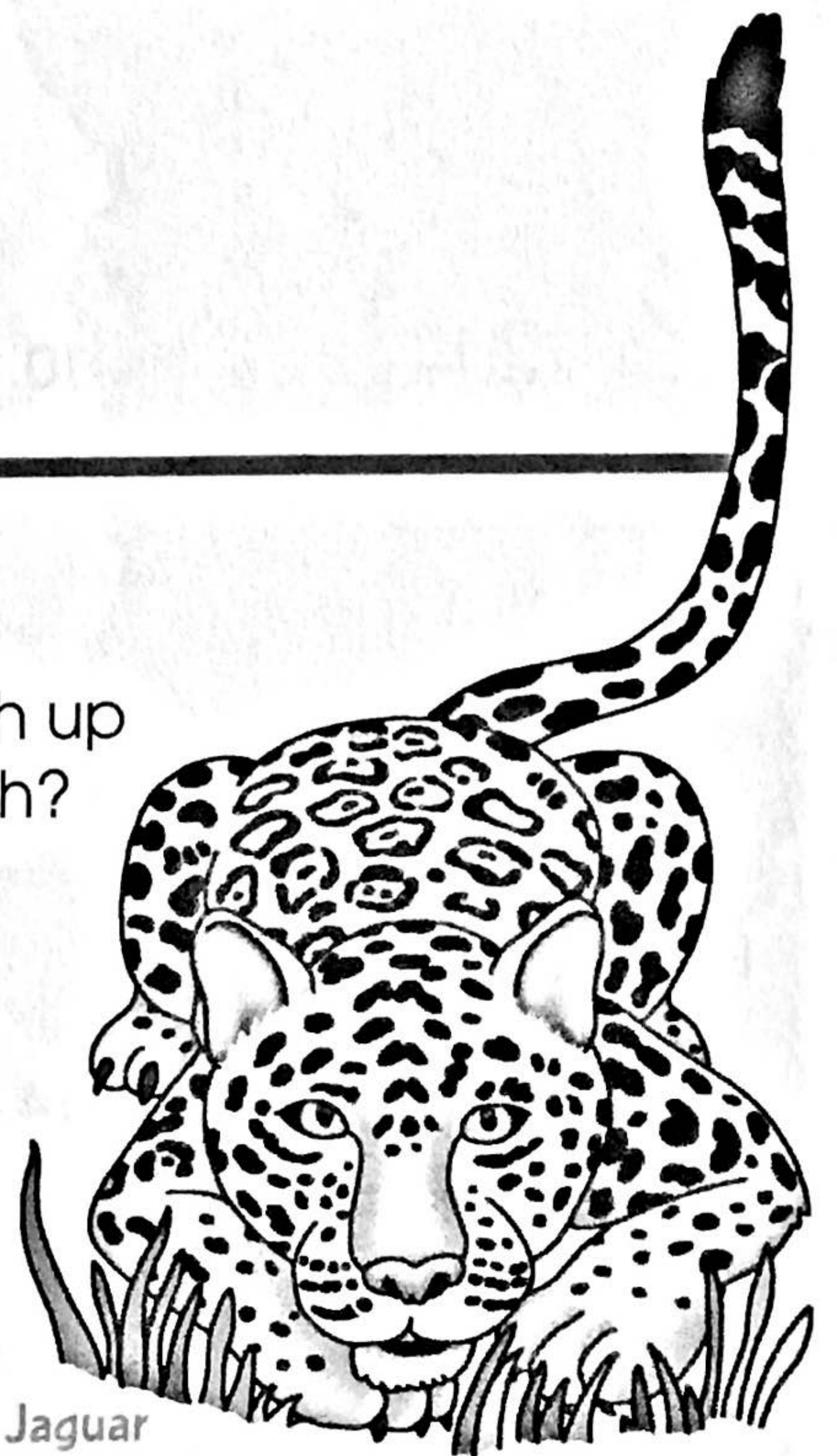
Solve the problem.

10. The largest bird is the ostrich. An ostrich can weigh up to 345 pounds. How much would 4 ostriches weigh?

\_\_\_\_\_

11. How many ostriches might weigh about one ton? A ton is 2,000 pounds.

\_\_\_\_\_



Jaguar

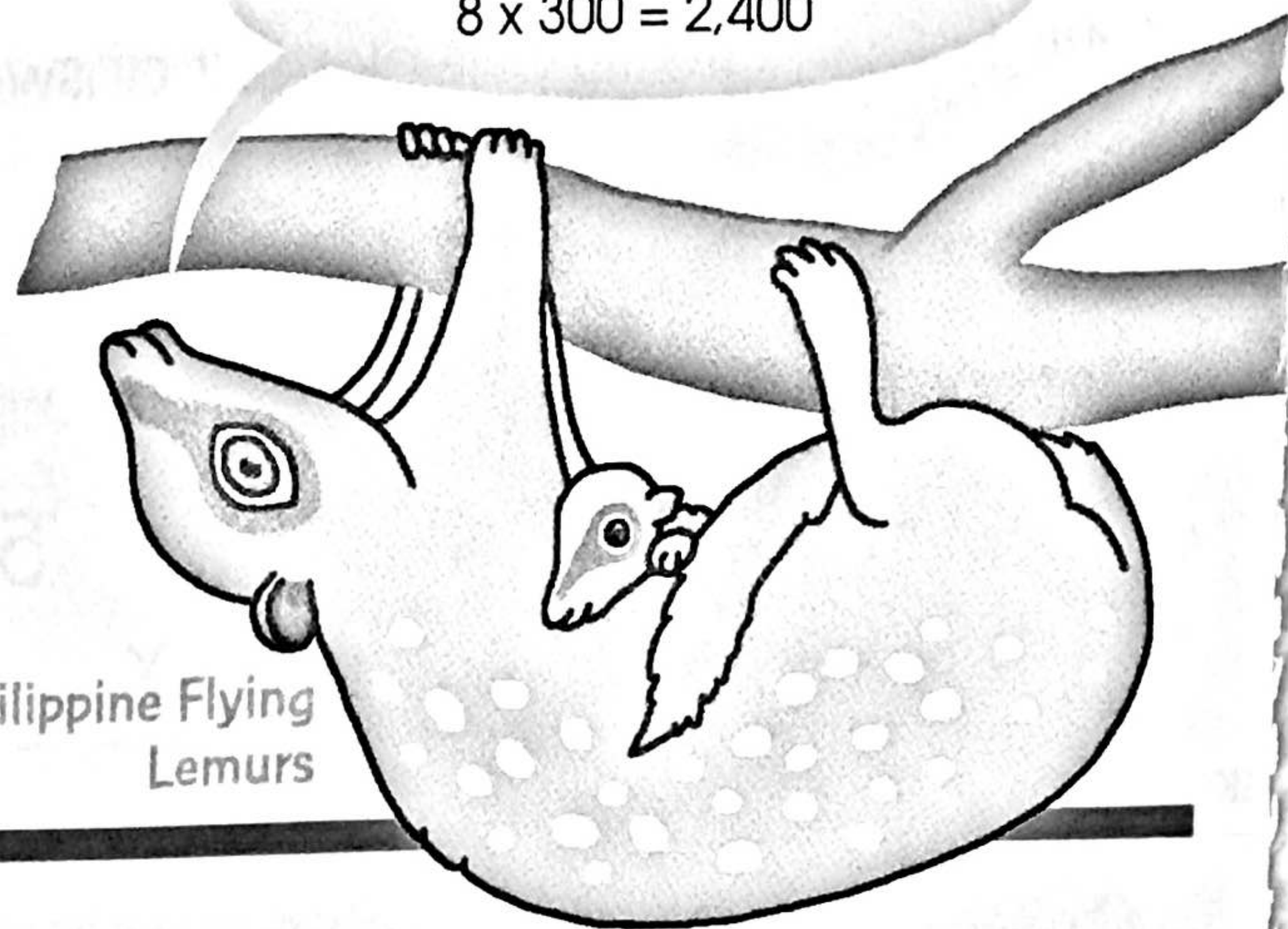
# Multiplying with Zeros

Estimate to check.  
 $8 \times 300 = 2,400$

$$\begin{array}{r} 307 \\ \times 8 \\ \hline 2,456 \end{array}$$

Multiply the ones. Regroup.  
 Multiply the tens.  
 $8 \times 0 = 0$  and  $0 + 5 = 5$   
 Multiply the hundreds.

Philippine Flying Lemurs



Multiply. Estimate to check your answer.

1. 
$$\begin{array}{r} 301 \\ \times 3 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 190 \\ \times 3 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 390 \\ \times 5 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 705 \\ \times 6 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 402 \\ \times 6 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 450 \\ \times 5 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 306 \\ \times 5 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 409 \\ \times 2 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 204 \\ \times 7 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 350 \\ \times 9 \\ \hline \end{array}$$

11. 
$$\begin{array}{r} 406 \\ \times 9 \\ \hline \end{array}$$

12. 
$$\begin{array}{r} 670 \\ \times 8 \\ \hline \end{array}$$

Find the missing digits.

13. 
$$\begin{array}{r} 3 \bullet 2 \\ \times 8 \\ \hline 2, \bullet 16 \end{array}$$

14. 
$$\begin{array}{r} 605 \\ \times \bullet \\ \hline 4, \bullet 40 \end{array}$$

15. 
$$\begin{array}{r} 34 \bullet \\ \times 5 \\ \hline 1, \bullet 00 \end{array}$$

16. 
$$\begin{array}{r} 2 \bullet 0 \\ \times 7 \\ \hline 1,8 \bullet 0 \end{array}$$



# Multiplying Four-Digit Numbers

$$\begin{array}{r} \phantom{0}^2 \phantom{0}^{11} \\ 5,432 \\ \times \phantom{0} \phantom{0} \phantom{0} 6 \\ \hline 32,592 \end{array}$$

Multiply the ones. Regroup.  
 Multiply the tens. Regroup.  
 Multiply the hundreds. Regroup.  
 Multiply the thousands.  $6 \times 5 = 30 + 2 = 32$

Multiply.

$$\begin{array}{r} 1. \quad 2,222 \\ \times \quad 3 \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 3,141 \\ \times \quad 5 \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 1,338 \\ \times \quad 6 \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 9,214 \\ \times \quad 4 \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 7,768 \\ \times \quad 2 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 5,261 \\ \times \quad 3 \\ \hline \end{array}$$

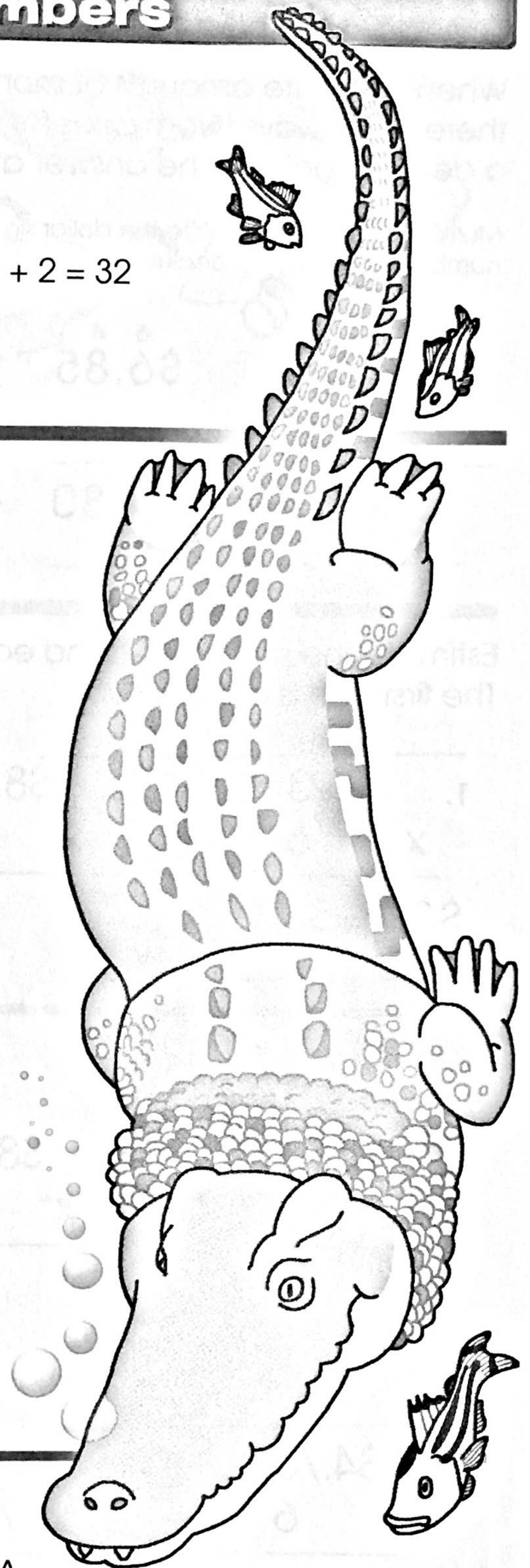
$$\begin{array}{r} 7. \quad 3,105 \\ \times \quad 7 \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 2,025 \\ \times \quad 8 \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 6,350 \\ \times \quad 5 \\ \hline \end{array}$$

Solve the problem.

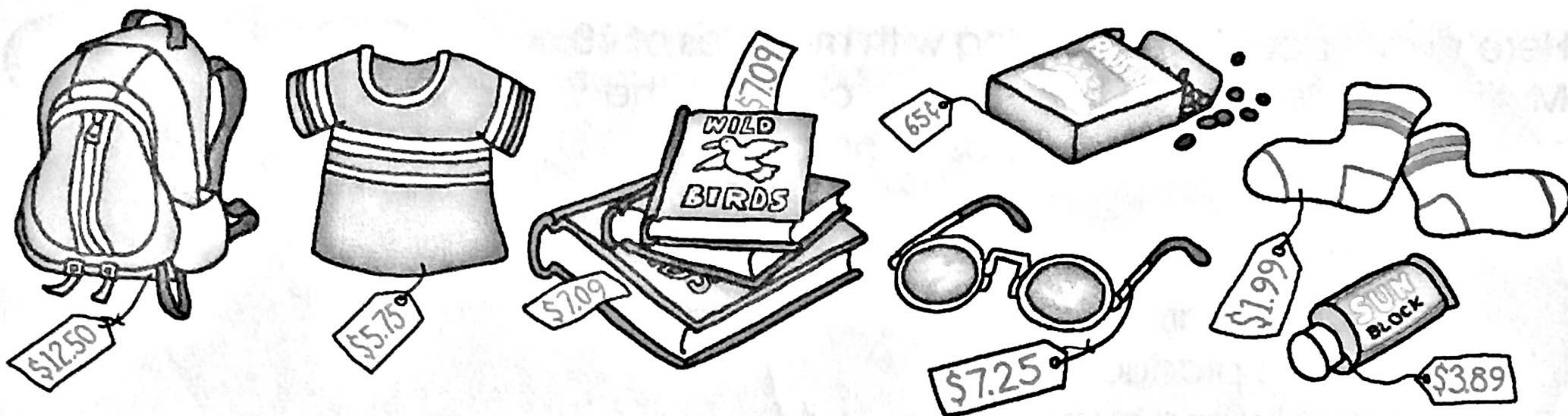
10. The largest reptile is the saltwater crocodile. A saltwater crocodile weighs about 1,500 pounds. How much would a half dozen of them weigh?



Saltwater Crocodile



# Multiplication Word Problems



Look at the prices above to solve each problem.  
Read the problems very carefully!

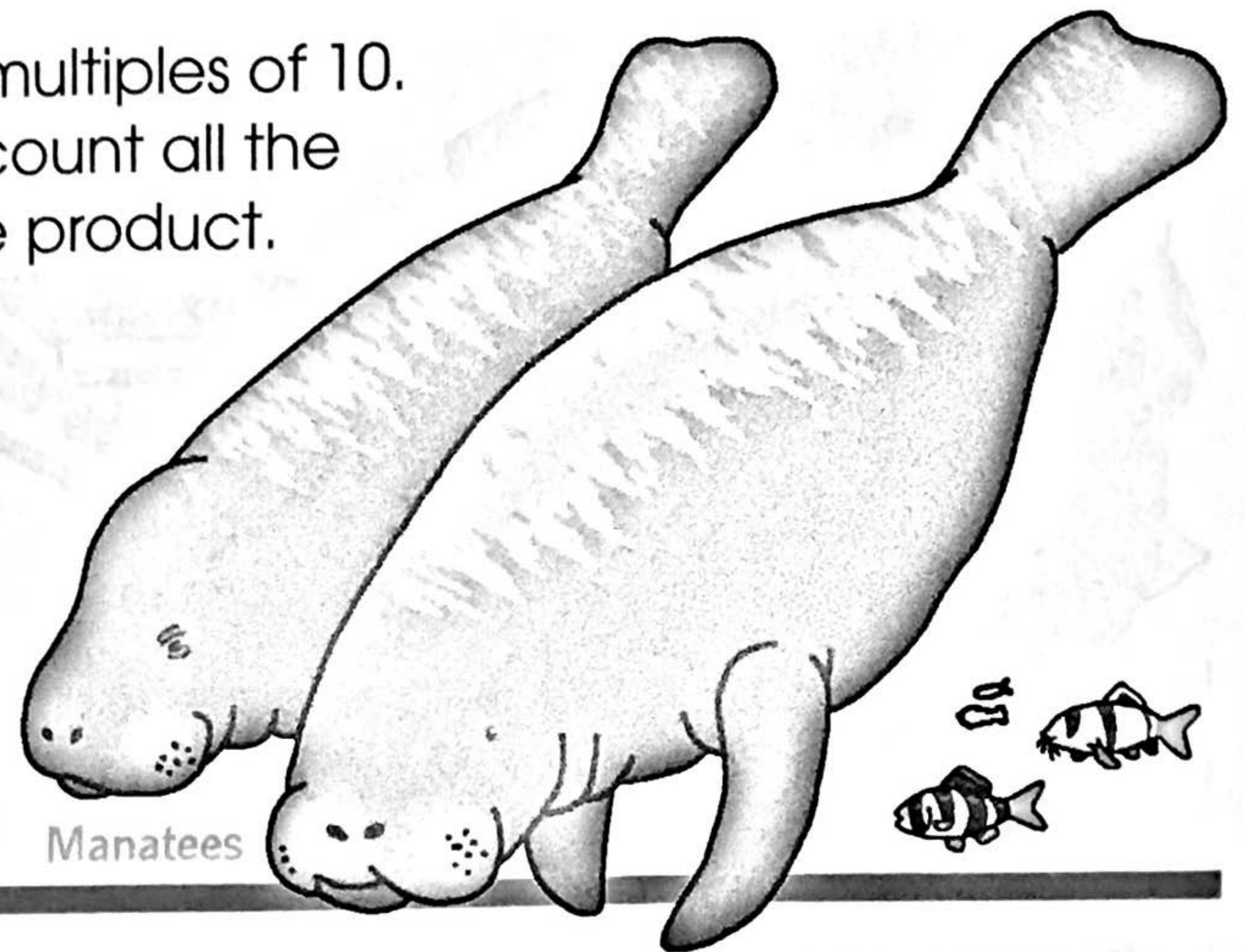
1. Joshua bought 3 t-shirts.  
How much did the t-shirts cost? \_\_\_\_\_
2. Joshua also bought 6 pairs of socks.  
How much did the socks cost? \_\_\_\_\_
3. Joshua and 3 friends each bought a new backpack. How much did all the backpacks cost? \_\_\_\_\_
4. The 4 campers bought 5 different bird books. How much did they spend on the books? \_\_\_\_\_
5. The 4 campers bought 2 boxes of raisins each for a snack on their hike. How much did they pay for all the boxes of raisins? \_\_\_\_\_
6. The 4 campers each bought a pair of sunglasses and a bottle of sunscreen. What was the total cost of these items for all the campers? \_\_\_\_\_

# Multiplying with Multiples

Here's a shortcut for multiplying with multiples of 10. Multiply the non-zero numbers. Then count all the zeros and write that many zeros in the product.

$$\begin{array}{r} 80 \\ \times 40 \\ \hline 3,200 \end{array}$$

$8 \times 4 = 32$   
There are two zeros.  
The product is 32  
followed by two zeros.



Multiply.

1. 
$$\begin{array}{r} 20 \\ \times 30 \\ \hline \end{array}$$

2. 
$$\begin{array}{r} 80 \\ \times 70 \\ \hline \end{array}$$

3. 
$$\begin{array}{r} 60 \\ \times 50 \\ \hline \end{array}$$

4. 
$$\begin{array}{r} 20 \\ \times 80 \\ \hline \end{array}$$

5. 
$$\begin{array}{r} 60 \\ \times 60 \\ \hline \end{array}$$

6. 
$$\begin{array}{r} 70 \\ \times 60 \\ \hline \end{array}$$

7. 
$$\begin{array}{r} 50 \\ \times 80 \\ \hline \end{array}$$

8. 
$$\begin{array}{r} 90 \\ \times 40 \\ \hline \end{array}$$

9. 
$$\begin{array}{r} 30 \\ \times 40 \\ \hline \end{array}$$

10. 
$$\begin{array}{r} 90 \\ \times 30 \\ \hline \end{array}$$

11. Complete the chart.

x	10	20	40	50	60	80
10						
30						
60						
70						
90						

Knowing how to multiply with multiples of 10 will help you estimate products on the next few pages.

# Multiplying by Two-Digit Numbers

Multiply by ones to find a partial product.

$$\begin{array}{r} 3 \\ 54 \\ \times 38 \\ \hline 432 \end{array}$$

$$8 \times 54 = 432$$

Multiply by tens to find another partial product.

$$\begin{array}{r} 1 \\ 54 \\ \times 38 \\ \hline 432 \\ 1620 \end{array}$$

$$3 \text{ tens} \times 54 = 162 \text{ tens}$$

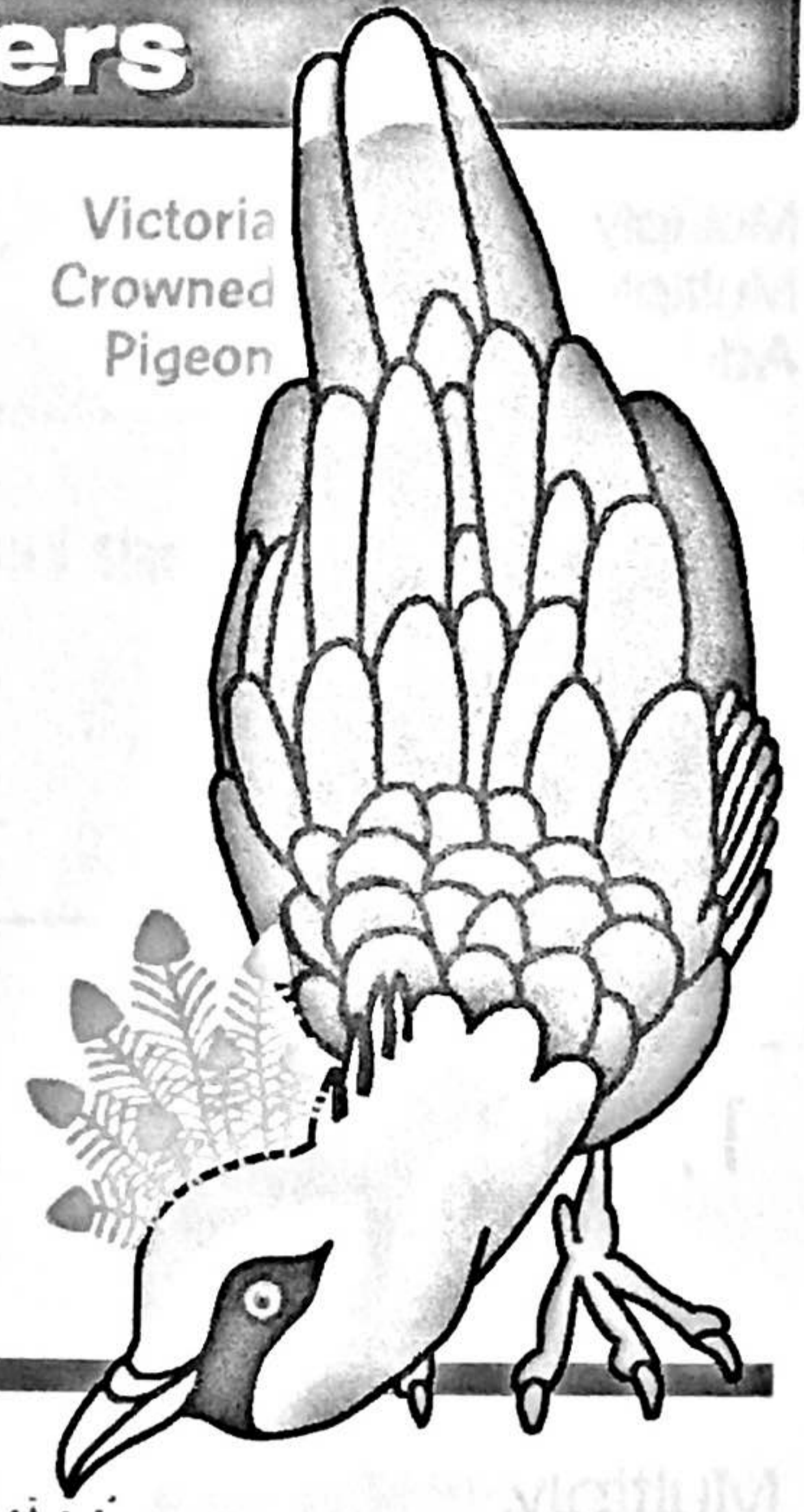
162 tens is 1,620.

Add the partial products.

$$\begin{array}{r} 54 \\ \times 38 \\ \hline 432 \\ + 1620 \\ \hline 2,052 \end{array}$$

$$432 + 1620 = 2,052$$

Victoria  
Crowned  
Pigeon



Multiply. Estimate to check your answer.

1.  $\begin{array}{r} 31 \\ \times 77 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

2.  $\begin{array}{r} 46 \\ \times 22 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

3.  $\begin{array}{r} 93 \\ \times 11 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

4.  $\begin{array}{r} 84 \\ \times 17 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

5.  $\begin{array}{r} 53 \\ \times 44 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

6.  $\begin{array}{r} 62 \\ \times 25 \\ \hline \end{array}$  Estimate  $\begin{array}{r} \times \\ \hline \end{array}$

Solve the problem.

7. Joshua has 23 classmates. He promised to send each of them a postcard from all of the 12 cities he plans to visit. How many postcards will he send? \_\_\_\_\_

# Multiplying by Multiples of Ten

Multiply by ones.  
Multiply by tens.  
Add partial products.

$$\begin{array}{r} 1 \\ 54 \\ \times 30 \\ \hline 00 \leftarrow 0 \times 54 \\ +1620 \leftarrow 30 \times 54 \\ \hline 1,620 \end{array}$$

Use a shortcut.  
Write a zero in the ones place.  
Multiply by tens.

$$\begin{array}{r} 1 \\ 54 \\ \times 30 \\ \hline 1,620 \uparrow \end{array}$$

Multiply.

1.  $\begin{array}{r} 32 \\ \times 30 \\ \hline \end{array}$

2.  $\begin{array}{r} 78 \\ \times 20 \\ \hline \end{array}$

3.  $\begin{array}{r} 63 \\ \times 50 \\ \hline \end{array}$

4.  $\begin{array}{r} 29 \\ \times 70 \\ \hline \end{array}$

5.  $\begin{array}{r} 31 \\ \times 20 \\ \hline \end{array}$

6.  $\begin{array}{r} 43 \\ \times 60 \\ \hline \end{array}$

7.  $\begin{array}{r} 25 \\ \times 40 \\ \hline \end{array}$

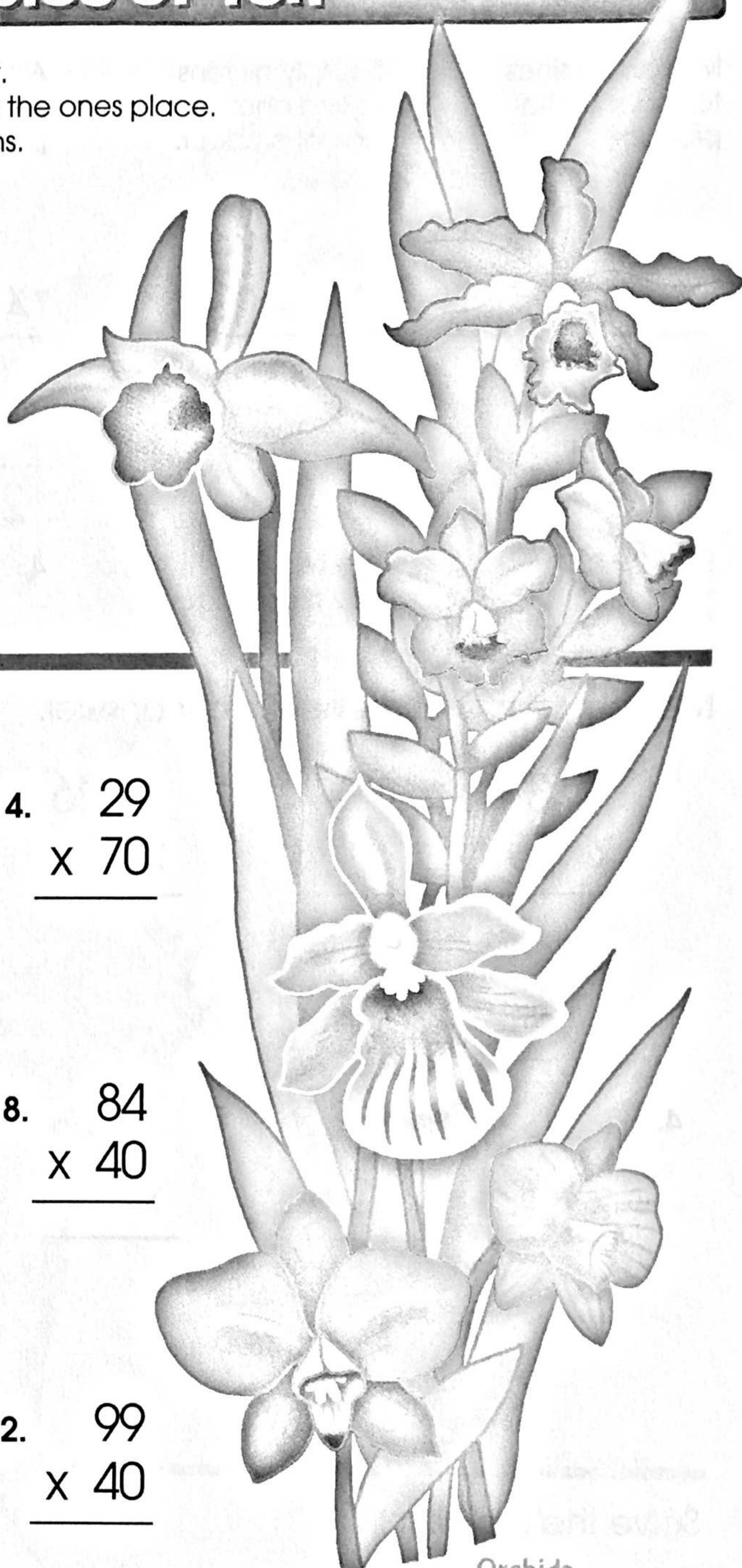
8.  $\begin{array}{r} 84 \\ \times 40 \\ \hline \end{array}$

9.  $\begin{array}{r} 23 \\ \times 30 \\ \hline \end{array}$

10.  $\begin{array}{r} 56 \\ \times 60 \\ \hline \end{array}$

11.  $\begin{array}{r} 71 \\ \times 50 \\ \hline \end{array}$

12.  $\begin{array}{r} 99 \\ \times 40 \\ \hline \end{array}$



Orchids

Solve the problem.

13. About 45 species of orchids were found blooming in a single rainforest tree. If 20 trees had the same number of different species, how many kinds of orchids would you find?

# Greatest and Least Products

Use a digit only once in each problem to find the product. You may use a calculator.

3 2 9 6 5

1. Find the greatest product.

$$\begin{array}{r} \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

2. Find the least product.

$$\begin{array}{r} \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

3. Find the greatest product.

$$\begin{array}{r} \bullet \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

4. Find the least product.

$$\begin{array}{r} \bullet \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

5. Find the greatest product.

$$\begin{array}{r} \bullet \bullet \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

6. Find the least product.

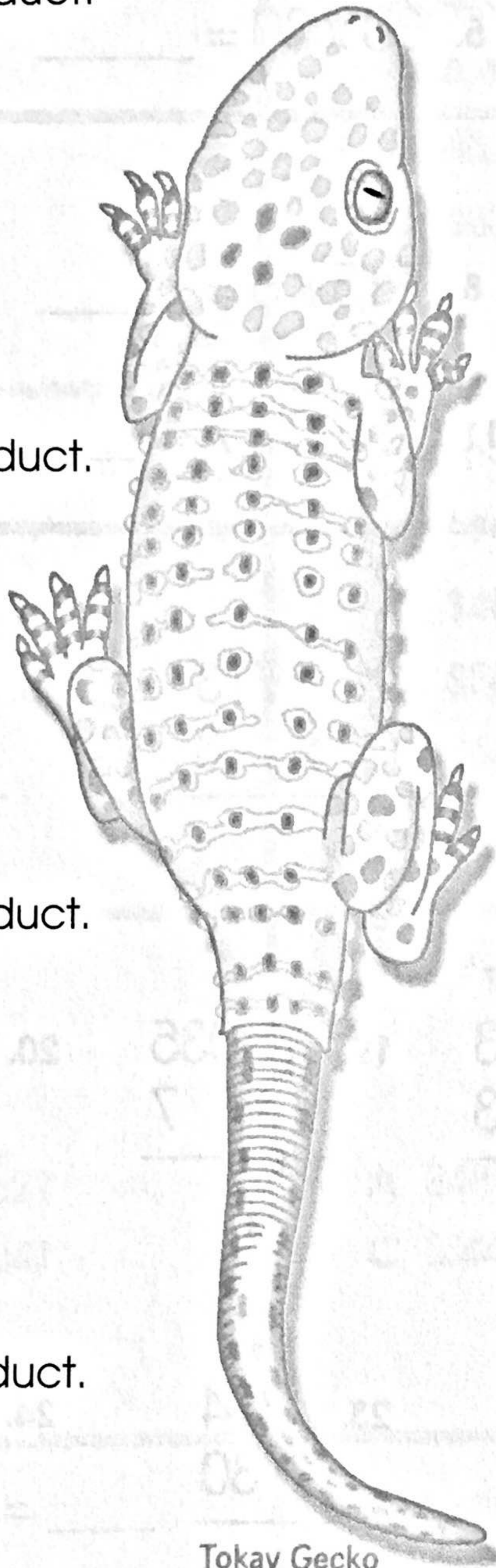
$$\begin{array}{r} \bullet \bullet \bullet \bullet \\ \times \bullet \\ \hline \end{array}$$

7. Find the greatest product.

$$\begin{array}{r} \bullet \bullet \\ \times \bullet \bullet \\ \hline \end{array}$$

8. Find the least product.

$$\begin{array}{r} \bullet \bullet \\ \times \bullet \bullet \\ \hline \end{array}$$



Tokay Gecko

# What I Learned about Multiplication

Multiply mentally.

1.  $6 \times 10 =$  \_\_\_\_\_

2.  $7 \times 50 =$  \_\_\_\_\_

3.  $400 \times 2 =$  \_\_\_\_\_

4.  $8 \times 700 =$  \_\_\_\_\_

5.  $30 \times 30 =$  \_\_\_\_\_

6.  $60 \times 90 =$  \_\_\_\_\_

Estimate the product.

7.  $5 \times 37 =$  \_\_\_\_\_

8.  $715 \times 6 =$  \_\_\_\_\_

9.  $178 \times 5 =$  \_\_\_\_\_

10.  $\$6.85 \times 3 =$  \_\_\_\_\_

11.  $2,190 \times 7 =$  \_\_\_\_\_

12.  $50 \times 58 =$  \_\_\_\_\_

Multiply.

13. 
$$\begin{array}{r} 23 \\ \times 3 \\ \hline \end{array}$$

14. 
$$\begin{array}{r} 69 \\ \times 7 \\ \hline \end{array}$$

15. 
$$\begin{array}{r} 713 \\ \times 3 \\ \hline \end{array}$$

16. 
$$\begin{array}{r} 825 \\ \times 6 \\ \hline \end{array}$$

17. 
$$\begin{array}{r} 509 \\ \times 4 \\ \hline \end{array}$$

18. 
$$\begin{array}{r} 4,273 \\ \times 3 \\ \hline \end{array}$$

19. 
$$\begin{array}{r} 6,035 \\ \times 7 \\ \hline \end{array}$$

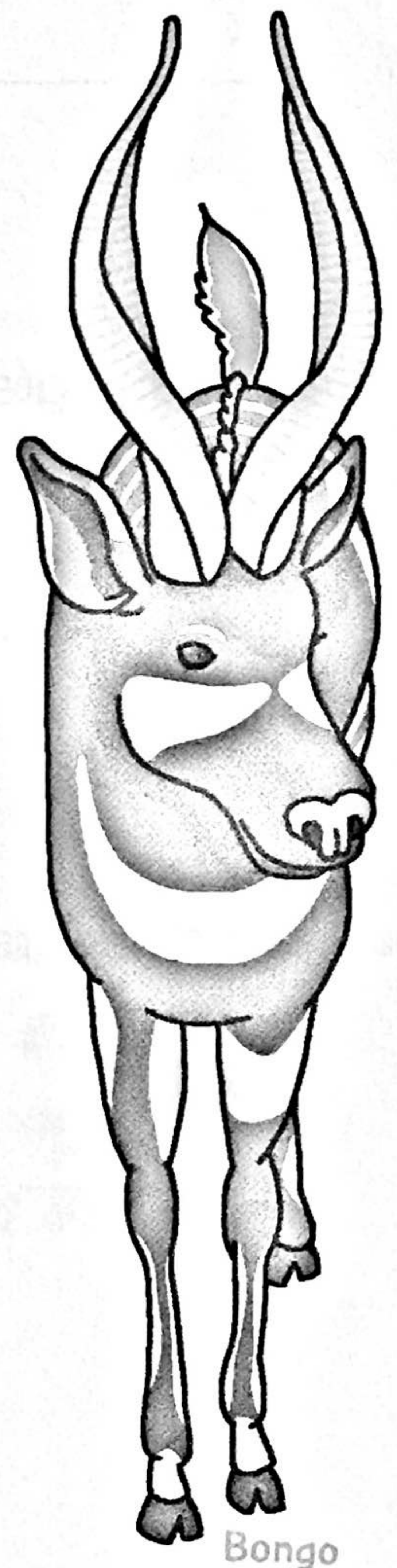
20. 
$$\begin{array}{r} \$5.39 \\ \times 8 \\ \hline \end{array}$$

21. 
$$\begin{array}{r} \$23.50 \\ \times 9 \\ \hline \end{array}$$

22. 
$$\begin{array}{r} 47 \\ \times 23 \\ \hline \end{array}$$

23. 
$$\begin{array}{r} 74 \\ \times 30 \\ \hline \end{array}$$

24. 
$$\begin{array}{r} 60 \\ \times 82 \\ \hline \end{array}$$



Bongo



Circle the answer.

25. Multiply:  $7 \times 900 =$  \_\_\_\_\_

- A. 630
- B. 6,300
- C. 63,000
- D. 630,000

26. Multiply:  $60 \times 80 =$  \_\_\_\_\_

- A. 480
- B. 4,800
- C. 48,000
- D. 480,000

27. Estimate:  $476 \times 3$  is about \_\_\_\_\_.

- A.  $400 \times 3$
- B.  $500 \times 3$
- C.  $400 \times 4$
- D.  $500 \times 4$

28. Estimate:  $\$6.81 \times 8$  is about \_\_\_\_\_.

- A. \$7
- B. \$48
- C. \$56
- D. \$63

29. Multiply:

$$\begin{array}{r} 863 \\ \times 7 \\ \hline \end{array}$$

- A. 5,601
- B. 5,621
- C. 6,021
- D. 6,041

30. Multiply:

$$\begin{array}{r} 508 \\ \times 6 \\ \hline \end{array}$$

- A. 348
- B. 3,048
- C. 3,448
- D. 34,048

31. Multiply:  $5,431 \times 7 =$  \_\_\_\_\_

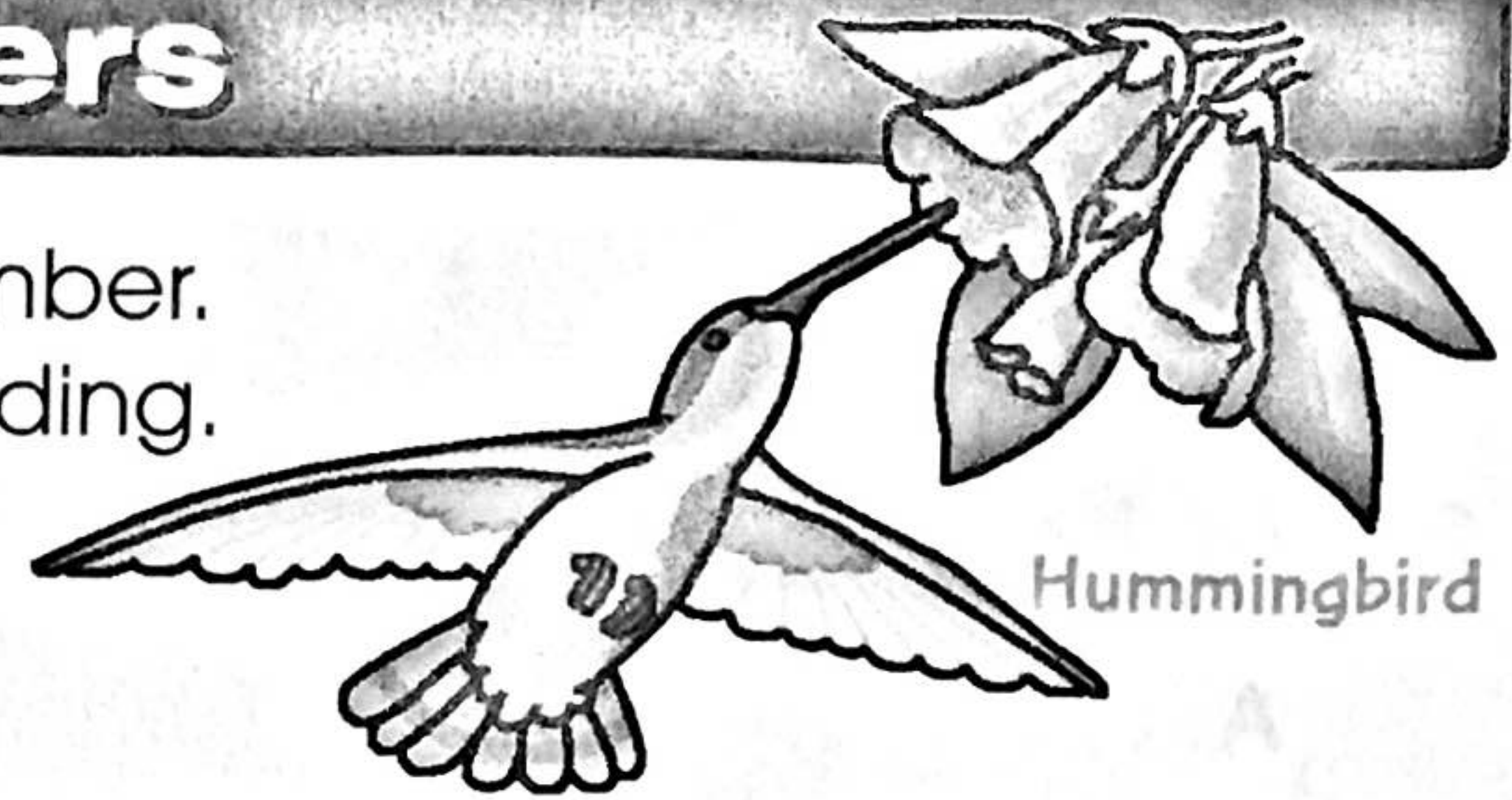
- A. 35,017
- B. 37,017
- C. 37,817
- D. 38,017

32. Multiply:  $78 \times 32 =$  \_\_\_\_\_

- A. 156
- B. 390
- C. 2,396
- D. 2,496

# Dividing Two-Digit Numbers

When you divide, there are five steps to remember. Repeat them over and over until you finish dividing.



Hummingbird

1. Divide

$$\begin{array}{r} 3 \\ 3 \overline{)96} \end{array}$$

$$9 \div 3 = 3$$

2. Multiply

$$\begin{array}{r} 3 \\ 3 \overline{)96} \\ \underline{9} \end{array}$$

$$3 \times 3 = 9$$

3. Subtract

$$\begin{array}{r} 3 \\ 3 \overline{)96} \\ \underline{-9} \\ 0 \end{array}$$

$$9 - 9 = 0$$

4. Compare

$$\begin{array}{r} 3 \\ 3 \overline{)96} \\ \underline{-9} \\ 0 \end{array}$$

$3 > 0$   
The divisor is greater than the difference.

5. Bring Down

$$\begin{array}{r} 3 \\ 3 \overline{)96} \\ \underline{-9} \downarrow \\ 06 \end{array}$$

Bring down the next number. Now you can do  $3 \overline{)6}$ .

Repeat the five steps. Then check your answer.

1. Divide

$$\begin{array}{r} 32 \\ 3 \overline{)96} \\ \underline{-9} \\ 06 \end{array}$$

$$6 \div 3 = 2$$

2. Multiply

$$\begin{array}{r} 32 \\ 3 \overline{)96} \\ \underline{-9} \\ 06 \\ 6 \end{array}$$

$$2 \times 3 = 6$$

3. Subtract

$$\begin{array}{r} 32 \\ 3 \overline{)96} \\ \underline{-9} \\ 06 \\ \underline{-6} \\ 0 \end{array}$$

$$6 - 6 = 0$$

4. Compare

$$\begin{array}{r} 32 \\ 3 \overline{)96} \\ \underline{-9} \\ 06 \\ \underline{-6} \\ 0 \end{array}$$

$$3 > 0$$

5. Bring Down

There is no other number to bring down, so the dividing is finished.

Check:

Multiply the quotient by the divisor.

$$\begin{array}{r} 32 \\ \times 3 \\ \hline 96 \end{array}$$

Divide. Then check your answer.

1.  $2 \overline{)84}$

Check:

X

2.  $4 \overline{)92}$

Check:

X

3.  $8 \overline{)96}$

Check:

X

4.  $3 \overline{)57}$

Check:

X

5.  $5 \overline{)95}$

Check:

X

6.  $7 \overline{)84}$

Check:

X

# Estimating Quotients



Matamata Turtle

To estimate a quotient, think of a basic division fact.

Think.  
 $48 \div 8 = 6$

Estimate:  $50 \div 8$



The estimate for  $50 \div 8$  is about 6.

Estimate the quotient. Write the basic division fact under the problem.  
The first one is done for you.

1.  $37 \div 4$  is about 9.

$36 \div 4 = 9$

2.  $62 \div 8$  is about \_\_\_\_.

\_\_\_\_\_

3.  $26 \div 8$  is about \_\_\_\_.

\_\_\_\_\_

4.  $29 \div 9$  is about \_\_\_\_.

\_\_\_\_\_

5.  $56 \div 6$  is about \_\_\_\_.

\_\_\_\_\_

6.  $29 \div 5$  is about \_\_\_\_.

\_\_\_\_\_

Estimate the quotient.

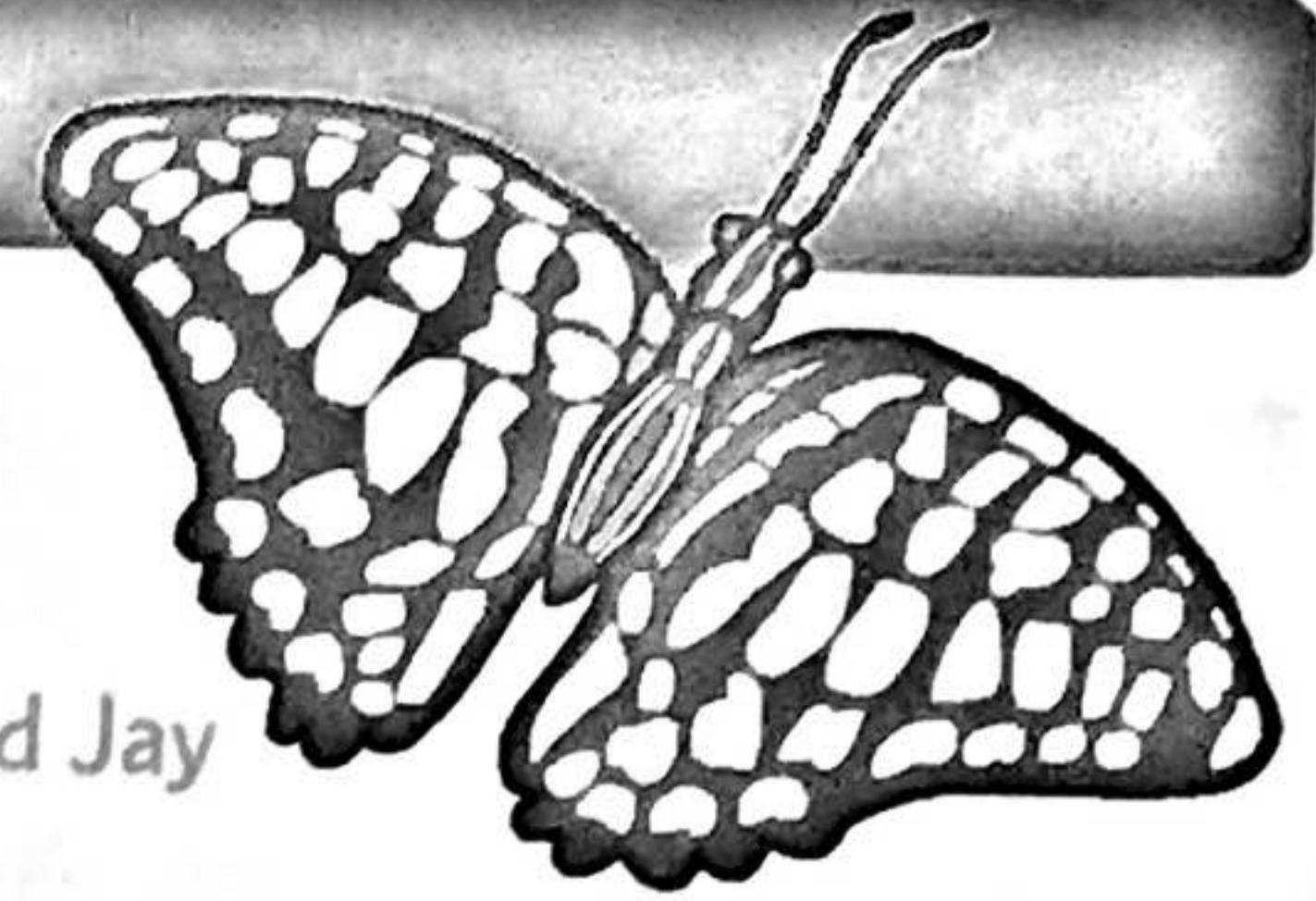
7.  $30 \div 7$  \_\_\_\_    8.  $40 \div 9$  \_\_\_\_    9.  $37 \div 5$  \_\_\_\_    10.  $29 \div 5$  \_\_\_\_

11.  $39 \div 4$  \_\_\_\_    12.  $52 \div 5$  \_\_\_\_    13.  $23 \div 3$  \_\_\_\_    14.  $58 \div 7$  \_\_\_\_

15.  $7 \overline{)29}$     16.  $6 \overline{)55}$     17.  $3 \overline{)16}$     18.  $8 \overline{)67}$     19.  $4 \overline{)17}$

20.  $4 \overline{)21}$     21.  $9 \overline{)28}$     22.  $5 \overline{)37}$     23.  $9 \overline{)95}$     24.  $4 \overline{)85}$

# Quotients with Remainders



Tailed Jay

Sometimes a division problem has a **remainder**.

If 23 frogs were divided into groups of 3, there would be 7 groups of 3 and 2 frogs remaining.

The **R** stands for **remainder**.

$$\begin{array}{r} 7 \text{ R}2 \\ 3 \overline{)23} \\ \underline{-21} \\ 2 \end{array}$$

Check: Multiply the quotient by the divisor. Then add the remainder.

$$\begin{array}{r} 7 \\ \times 3 \\ \hline 21 \\ + 2 \\ \hline 23 \end{array}$$

Divide. Then check your answer.

1.  $4 \overline{)47}$  Check: \_\_\_\_\_

2.  $6 \overline{)56}$  Check: \_\_\_\_\_

3.  $5 \overline{)29}$  Check: \_\_\_\_\_

4.  $2 \overline{)95}$  Check: \_\_\_\_\_

5.  $7 \overline{)89}$  Check: \_\_\_\_\_

6.  $6 \overline{)82}$  Check: \_\_\_\_\_

7.  $4 \overline{)39}$  Check: \_\_\_\_\_

8.  $3 \overline{)67}$  Check: \_\_\_\_\_

9.  $5 \overline{)52}$  Check: \_\_\_\_\_

# Dividing Three-Digit Numbers

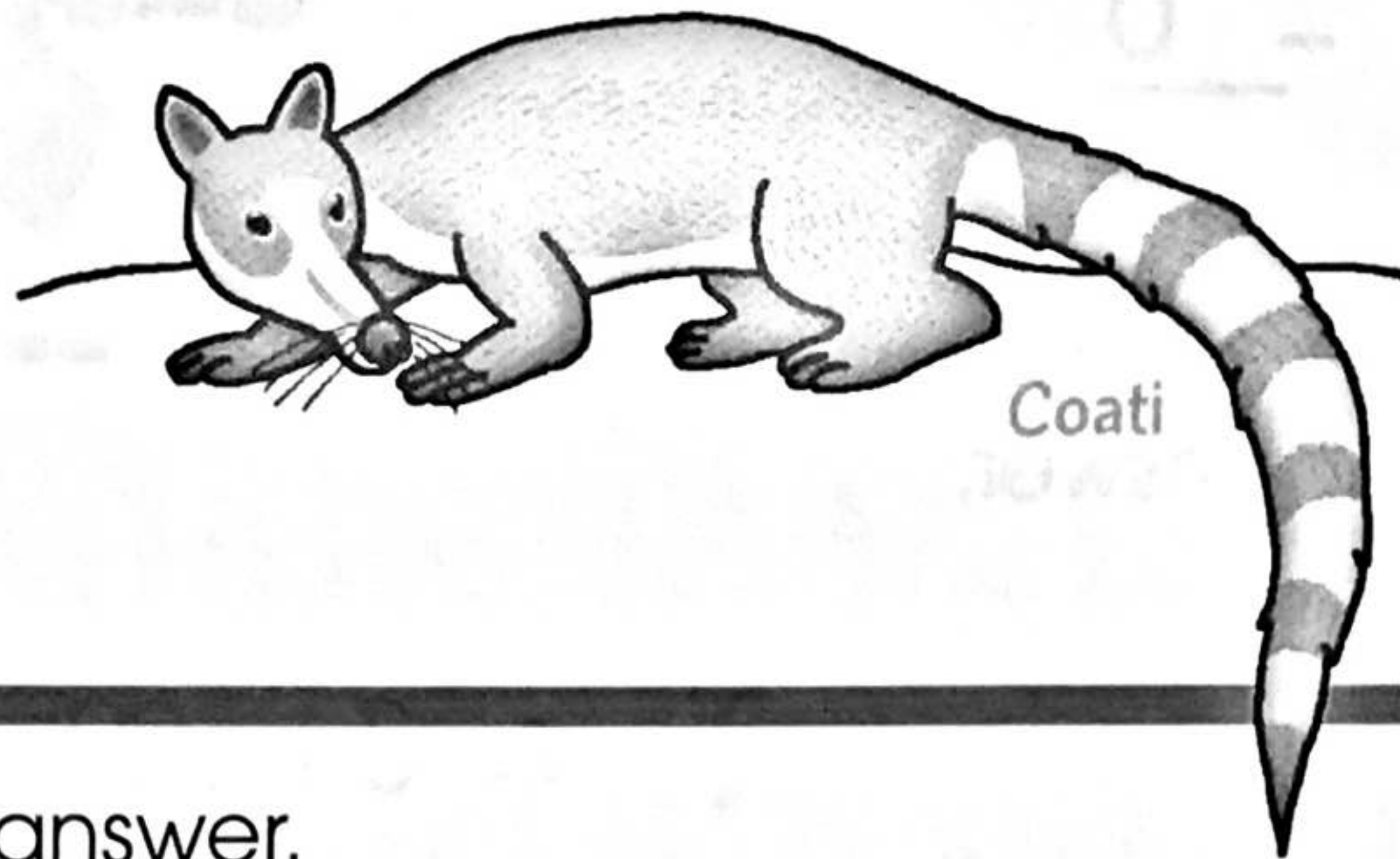
Look closely at these two problems.  
This one has a quotient with 3 digits.

$$\begin{array}{r} 124 \text{ R}3 \\ 5 \overline{)623} \\ \underline{-5} \phantom{00} \\ 12 \phantom{0} \\ \underline{-10} \phantom{0} \\ 23 \\ \underline{-20} \\ 3 \end{array}$$

Check:

$$\begin{array}{r} 124 \\ \times 5 \\ \hline 620 \\ + 3 \\ \hline 623 \end{array}$$

Remember to do the five steps of division.



This one has a quotient with 2 digits.

$$\begin{array}{r} 84 \text{ R}3 \\ 5 \overline{)423} \\ \underline{-40} \phantom{0} \\ 23 \\ \underline{-20} \\ 3 \end{array}$$

Check:

$$\begin{array}{r} 84 \\ \times 5 \\ \hline 420 \\ + 3 \\ \hline 423 \end{array}$$

Divide. Then check your answer.

1.  $4 \overline{)936}$  Check:

2.  $4 \overline{)336}$  Check:

3.  $4 \overline{)446}$  Check:

4.  $6 \overline{)249}$  Check:

5.  $7 \overline{)665}$  Check:

6.  $3 \overline{)940}$  Check:

7.  $8 \overline{)890}$  Check:

8.  $9 \overline{)621}$  Check:

9.  $7 \overline{)688}$  Check:

# Zeros in the Quotient

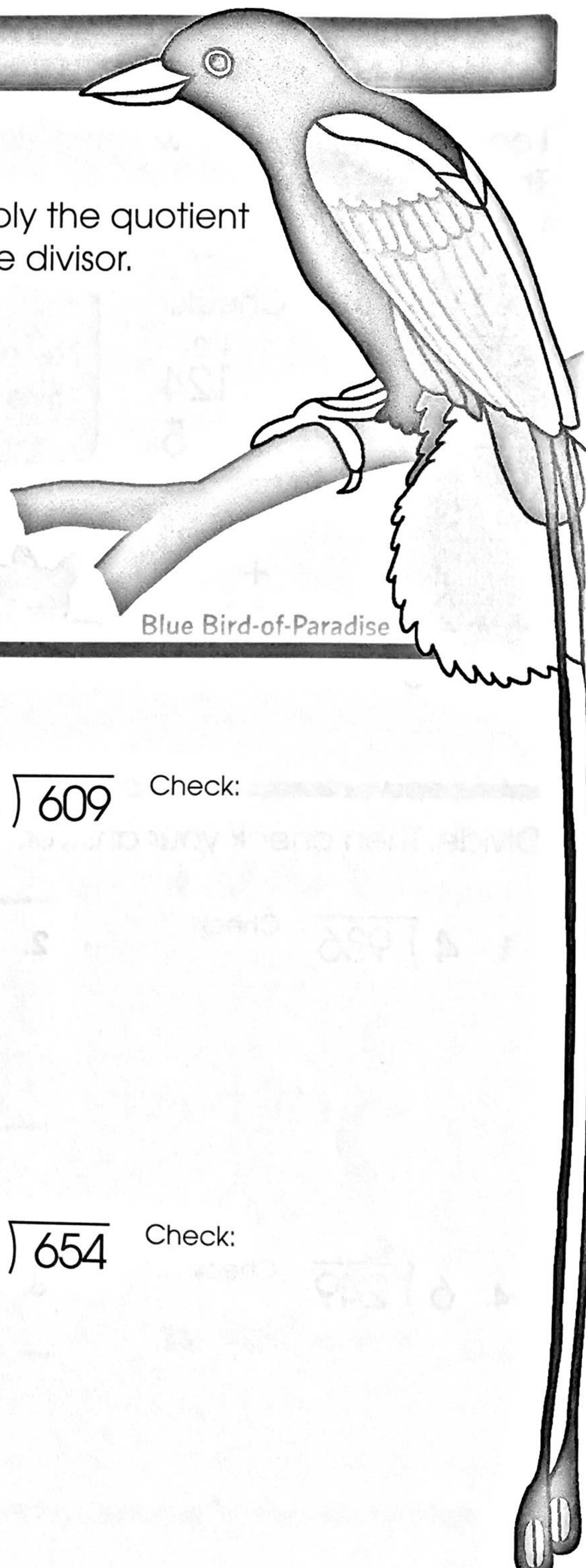
Follow the five steps for division.

1. Divide
2. Multiply
3. Subtract
4. Compare
5. Bring Down

$$\begin{array}{r} 120 \\ 5 \overline{)600} \\ \underline{-5} \phantom{00} \\ 10 \phantom{0} \\ \underline{-10} \phantom{0} \\ 00 \\ \underline{-0} \\ 0 \end{array}$$

Check: Multiply the quotient by the divisor.

$$\begin{array}{r} 1 \\ 120 \\ \times 5 \\ \hline 600 \end{array}$$



Blue Bird-of-Paradise

Divide. Then check your answer.

1.  $5 \overline{)535}$  Check:

2.  $3 \overline{)609}$  Check:

3.  $8 \overline{)960}$  Check:

4.  $6 \overline{)654}$  Check:

Solve the problem.

5. Joshua's family traveled 720 miles in 3 days. How many miles did they average each day? \_\_\_\_\_



# What I Learned about Division



Estimate the quotient.

1.  $38 \div 6$  is about \_\_\_\_\_.      2.  $8 \overline{)66}$  is about \_\_\_\_\_.

Divide. Then check your answer.

3.  $4 \overline{)95}$       Check:      4.  $6 \overline{)723}$       Check:      5.  $8 \overline{)302}$       Check:

6.  $6 \overline{)642}$       Check:      7.  $4 \overline{)688}$       Check:      8.  $3 \overline{)811}$       Check:

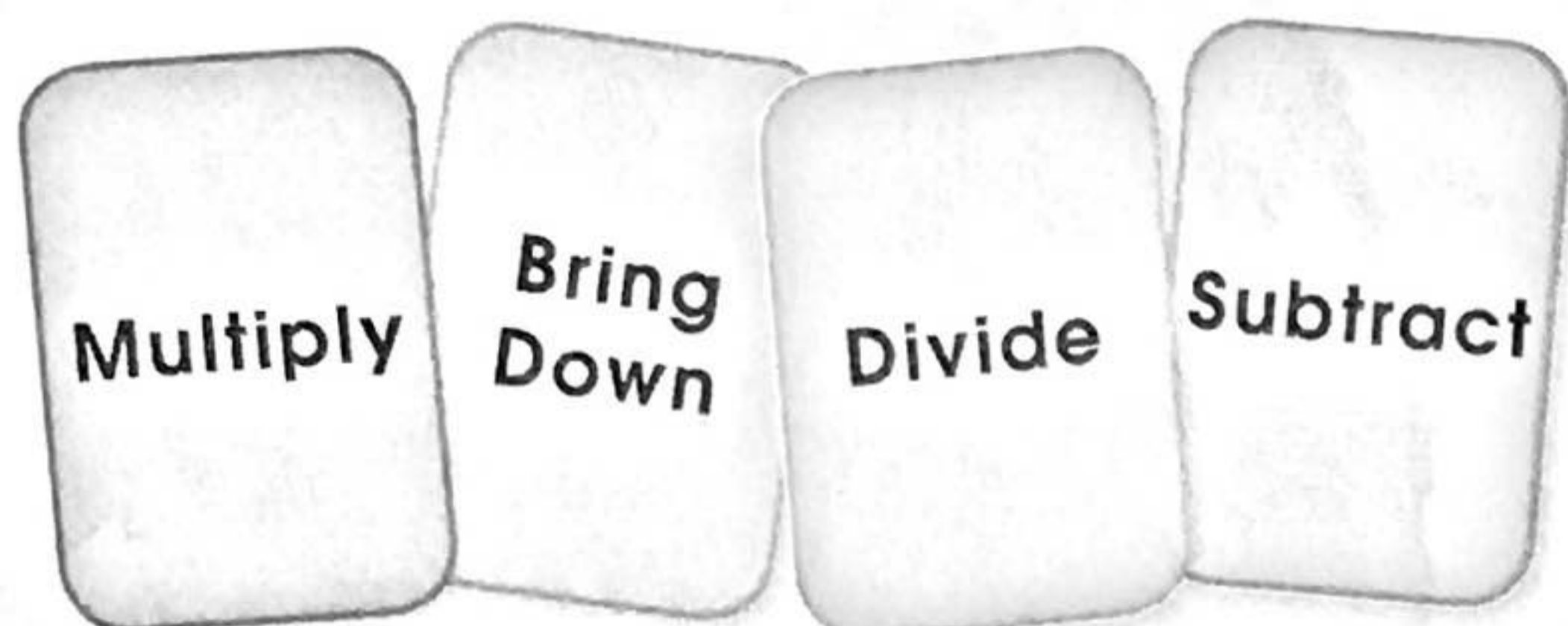
Divide. Show your work.

9.  $7 \overline{)91}$       10.  $4 \overline{)862}$       11.  $6 \overline{)58}$       12.  $5 \overline{)107}$
13.  $6 \overline{)820}$       14.  $5 \overline{)940}$       15.  $8 \overline{)275}$       16.  $4 \overline{)312}$
17.  $9 \overline{)803}$       18.  $6 \overline{)555}$       19.  $7 \overline{)808}$       20.  $3 \overline{)625}$



Circle the answer.

21. Which one of the five steps is missing in order to divide numbers?



- A. Add                      B. Compare  
C. Estimate                D. Remainder

22. How can you always check your answer to a division problem?

- A. Multiply the quotient by the dividend, and then add the remainder.  
B. Multiply the quotient and remainder by the divisor.  
C. Multiply the quotient by the divisor.  
D. Multiply the quotient by the divisor, and then add the remainder.

23. Estimate:  $62 \div 8$  is about \_\_\_\_.

- A. 6    B. 7    C. 8    D. 9

24. Estimate:  $6 \overline{)55}$  is about \_\_\_\_.

- A. 7    B. 8    C. 9    D. 10

25. Divide:  $916 \div 4 =$  \_\_\_\_

- A. 219                      B. 228 R2  
C. 229                      D. 229 R3

26. Divide:  $488 \div 7 =$  \_\_\_\_

- A. 68 R12                B. 69  
C. 69 R5                 D. 70 R8

27. Divide:  
The remainder for  $3 \overline{)162}$  is \_\_\_\_.

- A. 0    B. 3    C. 53    D. 54

28. Divide:  $624 \div 3 =$  \_\_\_\_

- A. 28    B. 201 R1    C. 208    D. 209

29. Which of these problems has a zero in the quotient?

- A.  $3 \overline{)973}$                 B.  $3 \overline{)627}$   
C.  $3 \overline{)597}$                 D.  $3 \overline{)651}$

30. Divide:  
 $157$  is the quotient for \_\_\_\_.

- A.  $4 \overline{)730}$                 B.  $3 \overline{)475}$   
C.  $5 \overline{)885}$                 D.  $6 \overline{)942}$

# Multiplication and Division Puzzle

Work the problems out on another piece of paper. Write the answers in the puzzle.

Across

Down

1.  $346 \times 8$

1.  $9 \overline{)252}$

5.  $4 \overline{)148}$

2.  $355 \times 2$

7.  $2 \times 407$

3.  $8 \times 8$

8.  $900 \div 6$

4.  $50 \times \underline{\quad} = 400$

9.  $6 \times 0$

5.  $7,006 \times 5$

10.  $75 \times 40$

6.  $700 \div 1$

12.  $9 \times 407$

8.  $848 \div 8$

13.  $6 \overline{)3,126}$

10.  $4 \times 9$

16.  $800 \times 3$

11.  $3 \times 509$

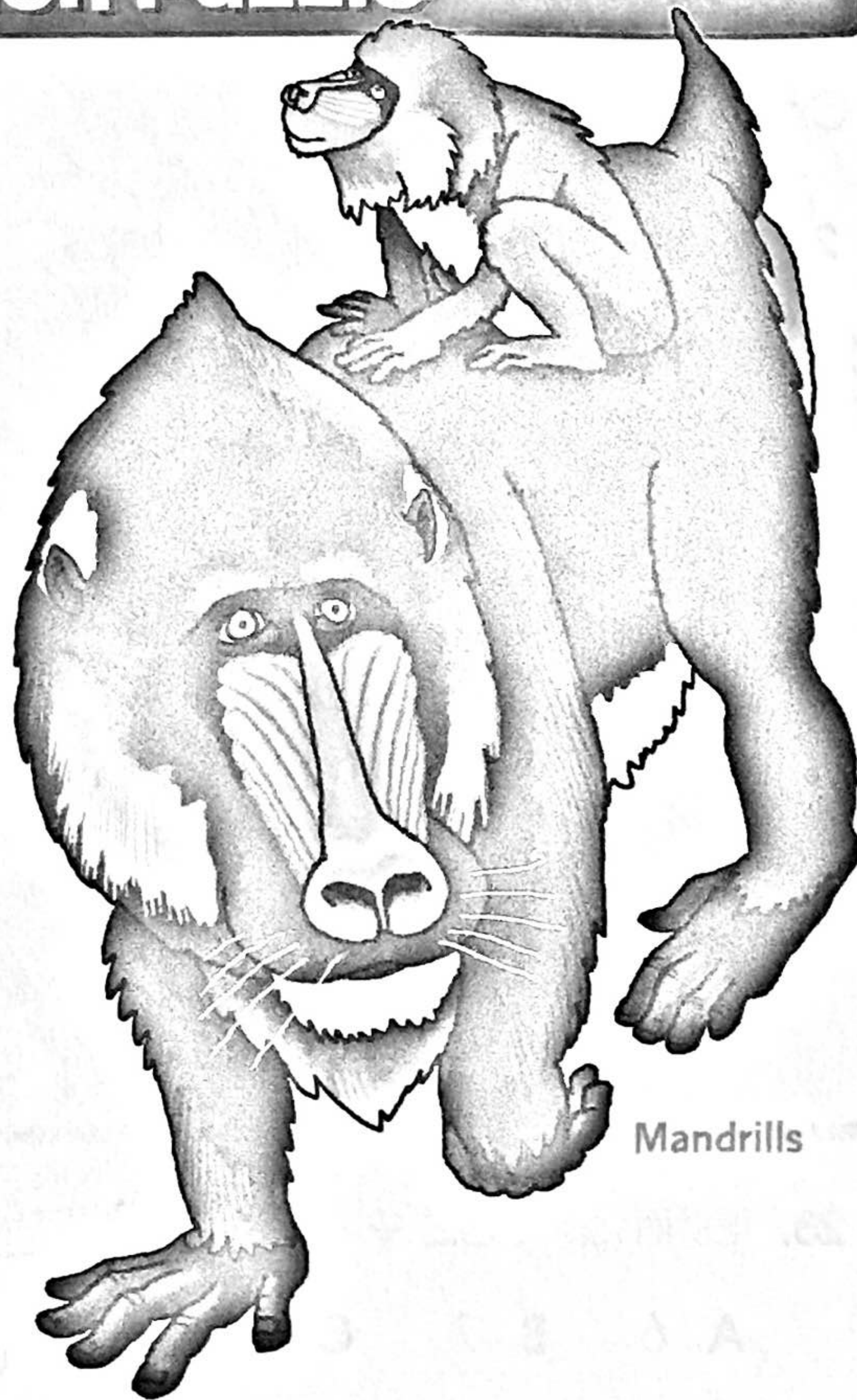
18.  $9 \times 81$

14.  $4 \overline{)968}$

19.  $107 \times 8$

15.  $654 \div 6$

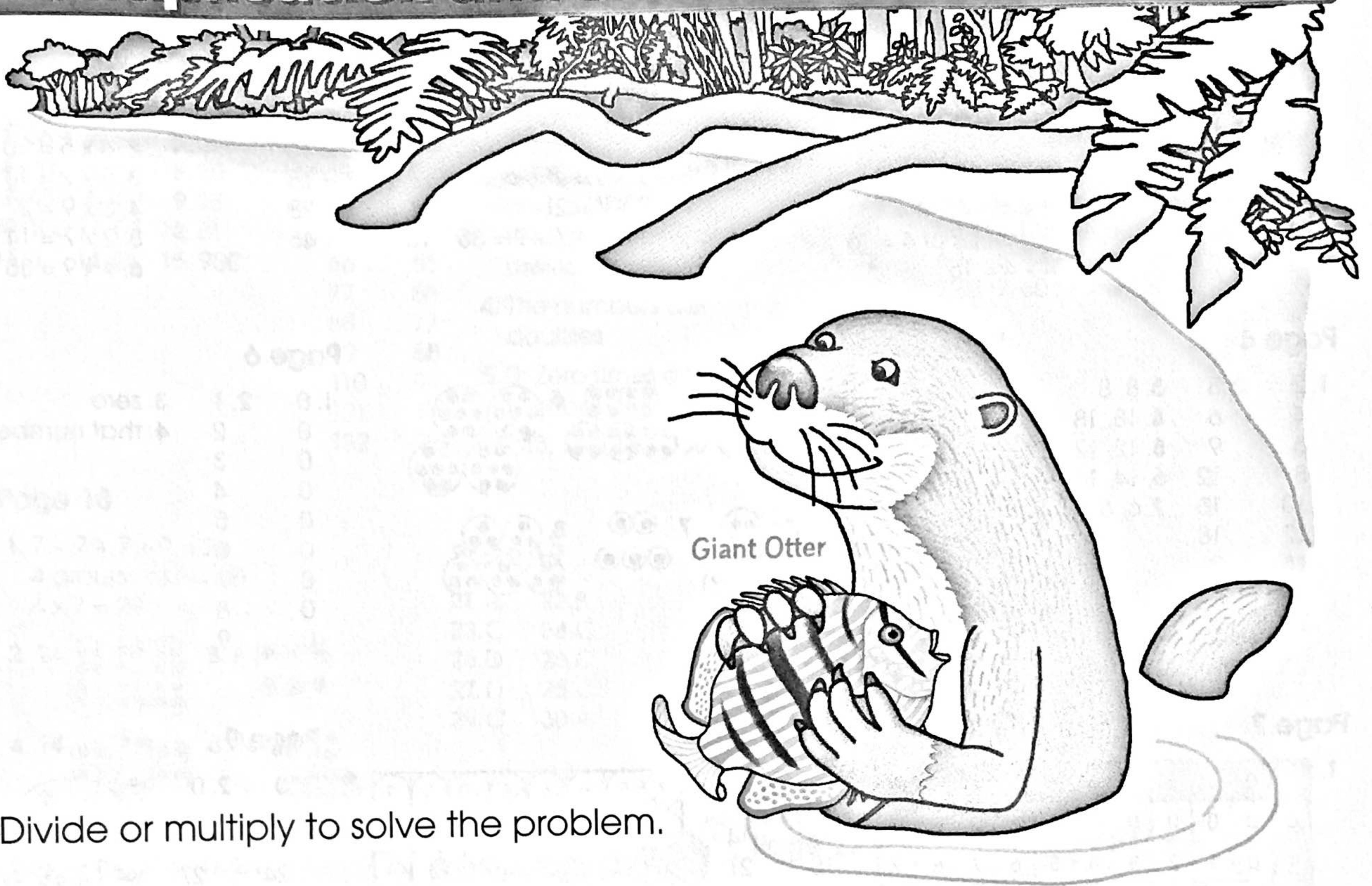
17.  $8 \overline{)368}$



Mandrills

1.	2.	3.	4.		5.	6.
7.				8.		
	9.		10.			
11.		12.				
13.	14.	15.				
16.						17.
18.				19.		

# Multiplication and Division Word Problems



Divide or multiply to solve the problem.

1. On Joshua's trip to South America, his family stopped to visit a rainforest. Joshua counted 58 plants in 1 square foot of the rainforest. How many plants could there be in 75 square feet of the rainforest?  
\_\_\_\_\_
2. Joshua's family stopped to eat at a restaurant. All 6 members of his family ate the same thing. Each person's meal cost \$7.65. What was the total amount of the bill?  
\_\_\_\_\_
3. Before Joshua visited South America, he read a book about rainforests that had 152 pages in it. If Joshua read 8 pages each day, how many days did it take him to read the book?  
\_\_\_\_\_
4. Joshua took 96 snapshots of the cities he visited on his trip to share with his friends. Each of his 6 friends received the same number of snapshots. How many snapshots did each friend get?  
\_\_\_\_\_