

Name .....

# MY Homework

## Lesson 1

### Multiply by 3

## Homework Helper



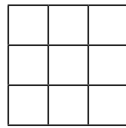
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Tyra has 3 posters on each of 3 walls in her bedroom.

How many posters does Tyra have in her room?

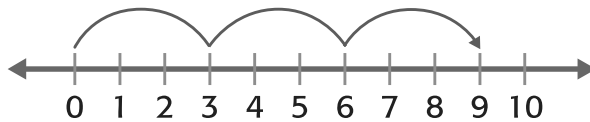
Find  $3 \times 3$ .

**One Way** Use an array to model 3 rows of 3.



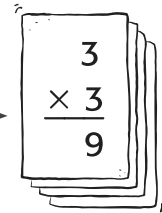
The array shows that 3 rows of 3 equals 9.

**Another Way** Use a number line.



The number line shows that 3 jumps of  $3 = 9$ .

So,  $3 \times 3 = 9$ . You can also write it like this.



Tyra has 9 posters in her room.

## Practice

Draw an array for each. Then write two multiplication sentences.

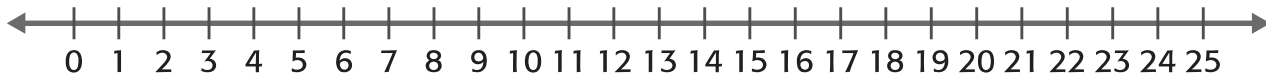
1. 3 rows of 8

\_\_\_\_\_  
\_\_\_\_\_

2. 6 rows of 3

\_\_\_\_\_  
\_\_\_\_\_

**Multiply. Use the number line to skip count if needed.**



3.  $5 \times 3 =$  \_\_\_\_\_

4.  $8 \times 3 =$  \_\_\_\_\_

5.  $7 \times 3 =$  \_\_\_\_\_

6.  $4 \times 3 =$  \_\_\_\_\_

**Algebra Find the unknown factor. Use the Commutative Property.**

7.  $\blacksquare \times 3 = 30$

8.  $3 \times \blacksquare = 18$

$3 \times \blacksquare = 30$

$\blacksquare \times 3 = 18$

The unknown is \_\_\_\_\_.

The unknown is \_\_\_\_\_.



## Problem Solving

**Write a multiplication sentence with a symbol for the unknown for Exercises 9 and 10. Then solve.**

9. A box of popcorn costs \$3 at the baseball game. The vendor sells 5 boxes to people in row 22. How much money did the vendor collect for the popcorn?

\_\_\_\_\_

10. Gloria has a study guide for her math, social studies, and science classes. Each study guide is 7 pages. How many pages of study guides does Gloria have in all?

\_\_\_\_\_

**Mathematical**  **11. PRACTICE Make Sense of Problems**

Meredith feeds her 3 dogs twice a day. How many times does she feed the dogs in 3 days?

\_\_\_\_\_

## Test Practice

12. There are 3 rows of cars in the parking lot. Each row has 5 cars. How many cars are in the parking lot?

- (A) 18 cars                      (C) 12 cars  
(B) 15 cars                      (D) 9 cars



Name .....

# MY Homework

## Lesson 2

### Divide by 3

## Homework Helper



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**Chuck and his 2 brothers read 12 books about the solar system. Each boy read the same number of books. How many books did each boy read? Find the unknown quotient.**

You need to find  $12 \div 3$ , or  $3 \overline{)12}$ .

Use the multiplication table.

**1** Find row 3. Circle the divisor.

**2** Move across row 3 to 12. Circle the dividend.

**3** Move straight up the column to 4. Circle the quotient.

×	0	1	2	3	4	5	6
0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6
2	0	2	4	6	8	10	12
3	0	3	6	9	12	15	18
4	0	4	8	12	16	20	24
5	0	5	10	15	20	25	30

So,  $12 \div 3 = 4$ . Each boy read 4 books.

## Practice

**Algebra** Use a related multiplication fact to find the unknown.

1.  $30 \div 3 = \blacksquare$

$3 \times \underline{\hspace{2cm}} = 30$

The unknown is \_\_\_\_\_.

2.  $18 \div 3 = \blacksquare$

$3 \times \underline{\hspace{2cm}} = 18$

The unknown is \_\_\_\_\_.

3.  $15 \div 3 = \blacksquare$

$3 \times \underline{\hspace{2cm}} = 15$

The unknown is \_\_\_\_\_.

4.  $21 \div 3 = \blacksquare$

$3 \times \underline{\hspace{2cm}} = 21$

The unknown is \_\_\_\_\_.

Use the multiplication table to divide.

5.  $24 \div 3 =$  \_\_\_\_\_

6.  $9 \div 3 =$  \_\_\_\_\_

7.  $27 \div 3 =$  \_\_\_\_\_

8.  $3 \div 3 =$  \_\_\_\_\_

9.  $18 \div 3 =$  \_\_\_\_\_

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100



## Problem Solving

10. Alana mailed 6 letters in 3 different mailboxes. She put the same number of letters in each mailbox. How many letters did Alana put in each mailbox?

\_\_\_\_\_

**Mathematical PRACTICE 2** Use Number Sense Ms. Banks divides 18 basketballs evenly among 3 bags. For class, she takes 2 basketballs from each bag. How many basketballs are left in one of the bags?

\_\_\_\_\_



## Test Practice

12. Elyse served herself and 2 friends 24 ounces of juice. She poured the same amount of juice in each glass. How many ounces of juice were in each glass?

- (A) 22 ounces      (C) 8 ounces
- (B) 12 ounces      (D) 6 ounces

# MY Homework

## Lesson 3

### Hands On: Double a Known Fact

## Homework Helper



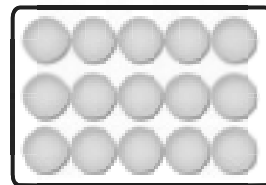
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### Find $6 \times 5$ .

Decompose, or separate, the factor 6 into two equal addends of  $3 + 3$ . Then you can double the known fact,  $3 \times 5$ .

#### 1 Model the known fact, $3 \times 5$ .

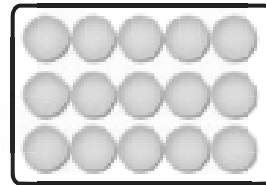
Use counters to make an array that shows 3 rows of 5.



$$3 \times 5 = 15$$

#### 2 Double the known fact.

Make another array that shows 3 rows of 5.



$$3 \times 5 = 15$$

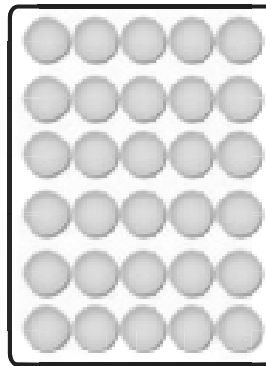
#### 3 Find $6 \times 5$ .

Push the two arrays together into 6 rows of 5.

Add the products from the two arrays:

$$15 + 15 = 30$$

The combined arrays show  $6 \times 5 = 30$ .



$$6 \times 5 = 30$$

## Practice

1. Draw counters to model a known fact that will help you find  $4 \times 5$ . Draw the model two times.

$$4 \times 5 = \underline{\hspace{2cm}}$$

$$\text{Known fact: } 2 \times 5 = \underline{\hspace{2cm}}$$

$$\text{Double the product: } 10 + 10 = \underline{\hspace{2cm}}$$



Name \_\_\_\_\_

# MY Homework

## Lesson 4

### Multiply by 4

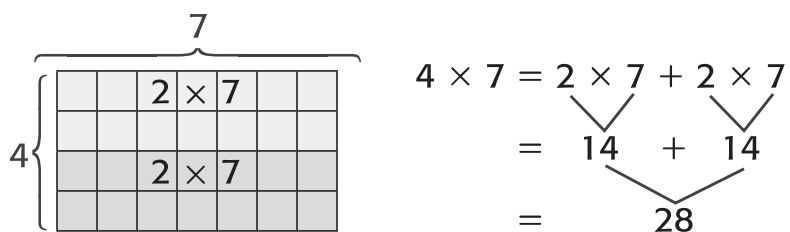
## Homework Helper



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Find  $4 \times 7$ .

Decompose 4 into equal addends of  $2 + 2$ .



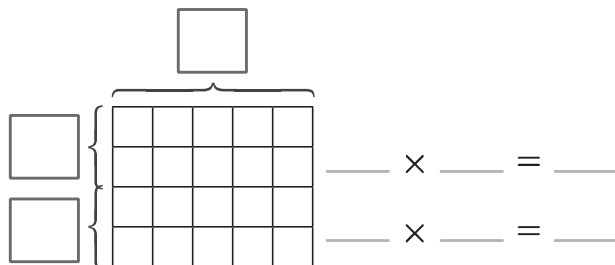
The array shows that 4 groups of 7 equals 2 groups of 7 plus 2 groups of 7.

So,  $4 \times 7 = 28$ .

## Practice

Double a known fact to find the product. Label the array and complete the number sentences.

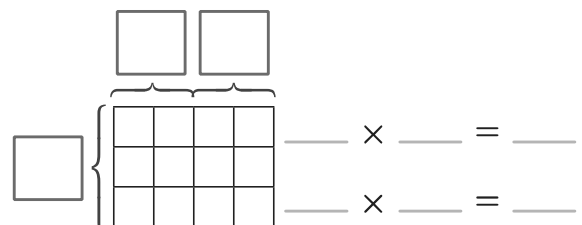
1.  $4 \times 5$



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

So,  $4 \times 5 =$  \_\_\_\_\_.

2.  $3 \times 4$



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

So,  $3 \times 4 =$  \_\_\_\_\_.

Double a known fact to find each product. Draw and label an array.

3.  $6 \times 4 =$  \_\_\_\_\_

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

Algebra Find each unknown. Double a known fact.

5.  $9 \times 4 =$  ■

6.  $4 \times 4 =$  ■


The unknown is \_\_\_\_\_.

The unknown is \_\_\_\_\_.



## Problem Solving

Mathematical

7. **PRACTICE**  **Model Math** Melissa owns 4 sets of jewelry. Each set contains 2 earrings, 1 necklace, 1 bracelet, and 1 ring. How many pieces of jewelry does Melissa have altogether? Write a multiplication sentence.

\_\_\_\_\_

## Vocabulary Check



Write a definition for the vocabulary word(s).

8. known fact \_\_\_\_\_

9. decompose \_\_\_\_\_

## Test Practice

10. There are 7 birdfeeders at the park. Each birdfeeder has 4 perches. How many birds can use the birdfeeders at the same time?
- (A) 32 birds                      (C) 11 birds  
(B) 28 birds                      (D) 3 birds



**MY Homework****Lesson 5****Divide by 4****Homework Helper**Need help? [connectED.mcgraw-hill.com](http://connectED.mcgraw-hill.com)

**The Dolan family bought a pack of 20 juice boxes. There are 4 people in the Dolan family. If they divide the juice boxes evenly, how many will each family member get?**

Find the unknown in  $20 \div 4 = \blacksquare$ , or  $4 \overline{)20}$ .

Use multiplication to find the unknown.

Think:  $\blacksquare \times 4 = 20$

You know that  $5 \times 4 = 20$ .

So,  $20 \div 4 = 5$ , or  $4 \overline{)20}$ .

The unknown is 5. Each family member will get 5 juice boxes.

**Practice**

**Use counters to find how many are in each group.**

- 1.** 8 counters  
4 equal groups

\_\_\_\_\_ in each group

So,  $8 \div 4 =$  \_\_\_\_\_.

- 2.** 40 counters  
4 equal groups

\_\_\_\_\_ in each group

So,  $40 \div 4 =$  \_\_\_\_\_.

- 3.** 28 counters  
4 equal groups

\_\_\_\_\_ in each group

So,  $28 \div 4 =$  \_\_\_\_\_.

- 4.** 12 counters  
4 equal groups

\_\_\_\_\_ in each group

So,  $12 \div 4 =$  \_\_\_\_\_.

Use repeated subtraction to divide.

5.  $24 \div 4 = \underline{\hspace{2cm}}$

$$\begin{array}{r} 24 \\ - 4 \\ \hline 20 \end{array}$$

↗ -

6.  $16 \div 4 = \underline{\hspace{2cm}}$

**Algebra** Use the inverse operation to find each unknown.

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

8.  $9 \times \underline{\hspace{2cm}} = 36$

$\underline{\hspace{2cm}} \div 4 = 2$

$36 \div 4 = \underline{\hspace{2cm}}$



## Problem Solving

Write a division sentence to solve.

9. A boat rental shop has enough boats for 28 people to ride. Each boat seats 4 people. How many boats does the shop have?

Mathematical



10. **PRACTICE** **Explain to a Friend** Ollie shared 24 marbles evenly with 3 friends. Kaitlyn shared 18 marbles evenly with 2 friends. Did Ollie or Kaitlyn's friends get more marbles? Explain.

## Test Practice

11. Each minute, 4 gallons of water flow into a bathtub. How many minutes does it take for the bathtub to have 32 gallons of water?
- (A) 6 minutes                      (C) 8 minutes  
(B) 7 minutes                      (D) 9 minutes

# MY Homework

## Lesson 6

### Problem Solving: Extra or Missing Information

## Homework Helper



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Arthur will cut a 12-foot board into 4 equal pieces. If it takes him 10 minutes to cut the board how long will each piece be?

### 1 Understand

What facts do you know?

Arthur has a 12-foot long board.

He will cut the board into 4 equal pieces.

It will take 10 minutes to cut the board.

What do you need to find?

the length of the 4 pieces

### 2 Plan

Decide which facts are important.

- the length of the board being cut
- the number of pieces being cut

### 3 Solve

Divide the board's length by the number of pieces being cut.

$$12 \div 4 = 3.$$

So, each piece will be 3 feet long.

### 4 Check

Does the answer make sense?

Use the inverse operation, multiplication, to check.

$$3 \times 4 = 12$$

So, the answer is reasonable.

### Extra Information

It will take him 10 minutes  
to cut the board.



# Problem Solving

Determine if there is extra or missing information to solve each problem. Then solve if possible.

1. Brandy ate 9 corn chips for a snack. She ate twice as many raisins. She also drank a juice box. How many raisins did Brandy eat?

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2. Miguel bought a movie ticket that cost \$5. He also bought popcorn and a bottle of water. How much did Miguel spend altogether?

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3. Annie has basketball practice from 2:30 P.M. to 4:00 P.M. She makes 10 free throws every practice. How many free throws does she make in 4 practices?


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4. Naya has 12 flowers. She gives away 6 to Jane and 3 to Heather. Hannah does not have any flowers. How many flowers does Naya have left?

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- Mathematical**  **3 PRACTICE** **Draw a Conclusion** Juan bought two new tires for his bike. He also had the bike tuned up. The total bill was \$65. How much did Juan spend on the 2 tires?

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My Work!



Name .....

# MY Homework

## Lesson 7

### Multiply by 0 and 1

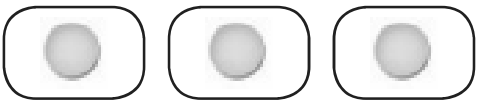
## Homework Helper



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**Three customers each bought a cone with 1 scoop of frozen yogurt. How many scoops did the customers buy in all?**

Find  $3 \times 1$ .



The Identity Property of Multiplication states that when any number is multiplied by 1, the product is that number.

So,  $3 \times 1 = 3$ .

**The 3 customers have eaten their frozen yogurt cones. Now how many scoops do the customers have in all?**

Find  $3 \times 0$ .



The Zero Property of Multiplication states that when any number is multiplied by 0, the product is 0.

So,  $3 \times 0 = 0$ .

## Practice

**Algebra Circle equal groups to find the unknown. Write the unknown.**

1.  $8 \times 1 = \blacksquare$

The unknown is \_\_\_\_\_.



2.  $5 \times 1 = \blacksquare$

The unknown is \_\_\_\_\_.





# MY Homework

## Lesson 8

### Divide with 0 and 1

## Homework Helper



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Larry has 3 keys. He divides them evenly among 1 keychain.  
How many keys are on each keychain?

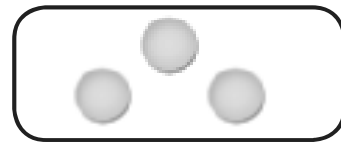
Find  $3 \div 1$ .

Use counters to model.

Divide 3 counters evenly into 1 group.

So,  $3 \div 1 = 3$ .

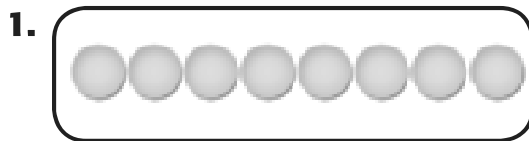
There are 3 keys on the keychain.



There are 3 counters  
in one group.

## Practice

Complete the division sentence for each model.



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



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



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



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

## Algebra Use a related multiplication fact to find the unknown.

5.  $9 \div 9 = \blacksquare$

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

The unknown is           .

6.  $0 \div 6 = \blacksquare$

$6 \times \underline{\hspace{2cm}} = 0$

The unknown is           .

7.  $0 \div 8 = \blacksquare$

$8 \times \underline{\hspace{2cm}} = 0$

The unknown is           .

8.  $2 \div 2 = \blacksquare$

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


The unknown is           .



## Problem Solving

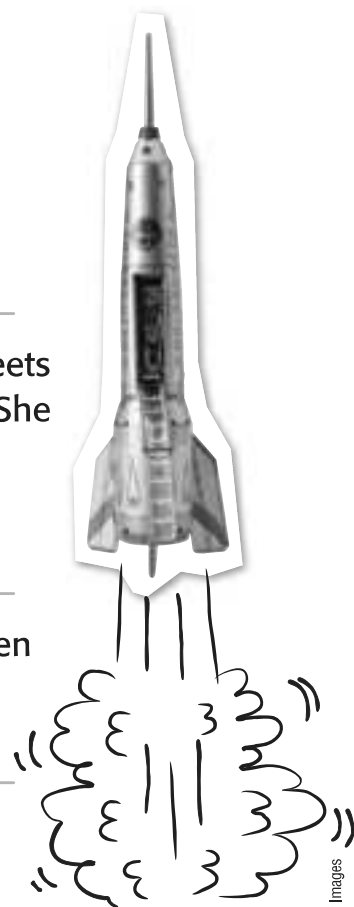
Write a division sentence to solve.

9. There are 15 children who want to share 15 apples. How many apples will each child get?

- Mathematical**  **10. PRACTICE** **Identify Structure** Mrs. Perkins needs 24 sheets of red paper so she can give one to each student in her class. She looked on the shelf, and there are no sheets of red paper left. How many sheets of red paper can Mrs. Perkins hand out?

11. Lionel bought 3 model rockets. He shares them equally between himself and 2 friends. How many rockets does each boy have?

12. Myra draws 5 animals for a class project. She puts each drawing in a separate folder. How many folders does Myra use?



## Test Practice

13. Angelina has 6 books. She has 1 backpack to carry her books. How many books does Angelina have in her backpack?

- (A) 7 books                      (C) 1 book  
(B) 6 books                      (D) 0 books

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