MY Homework

Homework Helper

eHelp

Need help? connectED.mcgraw-hill.com

Find the product of 3 × 4.

1 Find 3 in the far left column.

2 Find 4 in the row along the top.

3 Follow the numbers across and down until they meet. This is the product.

×	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

factors

$3 \times 4 = 12$ ← product
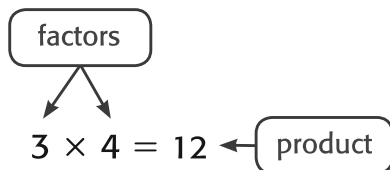
The Commutative Property tells you that you can change the order of the factors without changing the product.

factors

$4 \times 3 = 12$ ← product

Practice

1. Look at the products with a factor of 5. What pattern do you

see? The products with a factor of 5 end in _____ or

_____ .

2. Look at the products with a factor of 0. What do you notice?

The products with a factor of 0 end in _____ .

3. Find 10 × 5. Circle the factors and the product. Write the product.

_____

4. Shade a row of numbers yellow to show the products with a factor of 10. What do you notice about this row?

The products with a factor of 10 end

in _____.

×	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

Real World Problem Solving

5. Mathematical **PRACTICE** 4 **Model Math** Mason has 1 notebook for science and 1 notebook for reading. He put 9 stickers on each notebook. How many stickers did Mason use in all? Write two multiplication sentences.

_____

Vocabulary Check [Vocab]

6. Label each with the correct word.

factors

product   4 × 2 = 8 ◄

Test Practice

7. Which property states the order in which two numbers are multiplied does not change the product?

Ⓐ Associative Property of Addition

Ⓑ Commutative Property of Multiplication

Ⓒ Inverse Operations

Ⓓ Identity Property of Addition

MY Homework
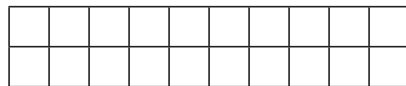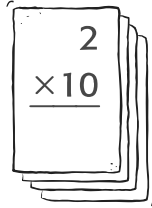
Lesson 2

Multiply by 2

Homework Helper

Need help? connectED.mcgraw-hill.com

Helen buys 2 bunches of bananas. There are 10 bananas in each bunch. How many bananas does Helen buy in all?

Find 2×10.

This can be written vertically, also.

Use an array to model 2 groups of 10.

$$\begin{array}{r} 2 \\ \times 10 \\ \hline \end{array}$$

You can write an addition sentence to represent the models.

$$10 + 10 = 20$$

OR

You can write a multiplication sentence to represent the models.

$$2 \times 10 = 20$$

So, Helen bought 20 bananas in all.

Practice

Write an addition sentence and a multiplication sentence.

1.

3 groups of 2 is _____.

$2 +$ _____ $+$ _____ $=$ _____

_____ $\times 2 =$ _____

2.

4 groups of 2 is _____.

$2 +$ _____ $+$ _____ $+$ _____ $=$ _____

_____ $\times 2 =$ _____

Draw an array for each. Then write a multiplication sentence.

3. 7 rows of 2

4. 2 rows of 5

_____ × _____ = _____   _____ × _____ = _____

Problem Solving

Mathematical PRACTICE 2 **Use Algebra** **Write a multiplication sentence with a symbol for the unknown. Then solve.**

5. Franklin's father gave him and his sister $8 each to spend at the movies. How much money did Franklin's father give the children altogether?

_____

6. There are 7 people in the Watson family. They all keep their gloves in 1 box in the closet. If each person has a pair of gloves, how many gloves are in the box?

_____

Vocabulary Check

Vocab

7. Write or draw the meaning of a bar diagram.

_____

_____

Test Practice

8. James is jumping on a pogo stick. He is counting by twos. If he counts to 12, how many jumps has he made?

  Ⓐ 2 jumps   Ⓒ 6 jumps

  Ⓑ 4 jumps   Ⓓ 10 jumps

MY Homework

Homework Helper

eHelp
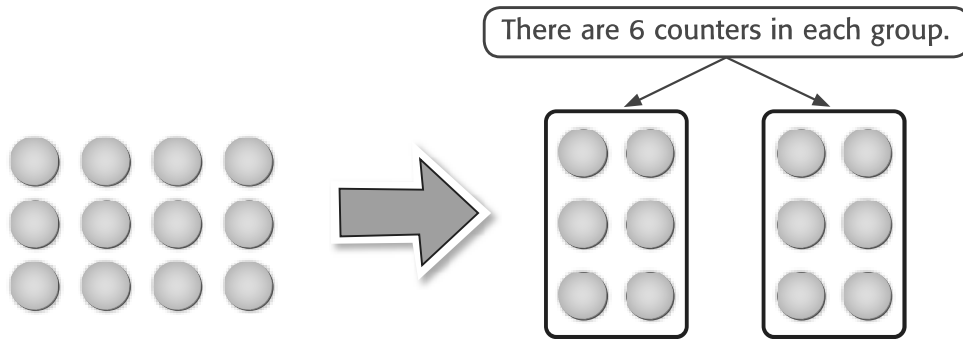
Need help? connectED.mcgraw-hill.com

The school van can carry 12 passengers. There are 2 passengers to a seat. How many seats are in the van?

Find $12 \div 2$, or $2\overline{)12}$.

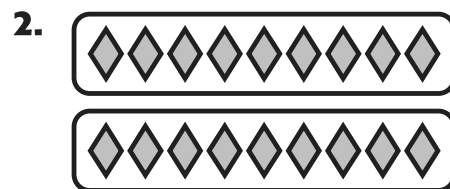Partition 12 counters between 2 groups until there are none left.

There are 6 counters in each group.

So, $12 \div 2 = 6$ or $2\overline{)12}^{\,6}$. There are 6 seats in the van.

Practice

Divide. Write a related multiplication fact.

1.

$8 \div 2 =$ _____

_____ × _____ = _____

2.

$18 \div 2 =$ _____

_____ × _____ = _____

Divide. Write a related multiplication fact.

3. 20 ÷ 2 = _____

4. 6 ÷ 2 = _____

5. 12 ÷ 2 = _____

_____

_____

_____

6. 2) 8

7. 2) 14

8. 2) 4

_____

_____

_____

Problem Solving

9. Algebra Britt spent $12 equally at 2 stores. How much did she spend at each store? Write a number sentence with a symbol for the unknown. Then solve.

_____

10. **Mathematical PRACTICE 1** **Keep Trying** Ian picked up 16 red cars and 12 black cars from the floor of his room. He put the same number of each color car into 2 boxes. How many cars did he put in each box?

_____

Vocabulary Check

11. Write or draw a definition of the word partition.

_____

_____

Test Practice

12. Casey bought a box of 18 granola bars. She kept some and gave the rest to her brother. If Casey and her brother have the same number of granola bars, how many did Casey give her brother?

   Ⓐ 1 granola bar
   Ⓒ 9 granola bars

   Ⓑ 8 granola bars
   Ⓓ 7 granola bars

MY Homework

Lesson 4

Multiply by 5

Homework Helper

eHelp
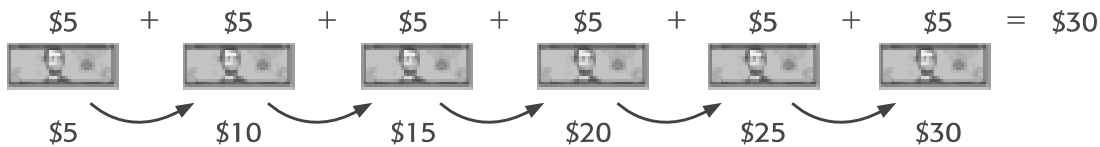
Need help? connectED.mcgraw-hill.com

There are 6 students. Each student donates $5 to a school fundraiser. How much money did the students donate in all?
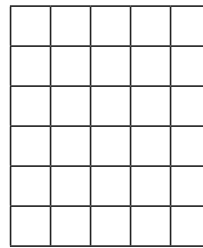
Find 6 × $5.

One Way Skip count by fives.

$5 + $5 + $5 + $5 + $5 + $5 = $30

$5 $10 $15 $20 $25 $30

Another Way Draw an array.

6 rows of 5 = 30

So, the 6 students donated a total of $30.

Practice

Write an addition sentence to help find each product.

1. 3 × 5 = _____

_____

2. 8 × 5 = _____

_____

3. 5 × 5 = _____

_____

Write a multiplication sentence for each array.

4. 1 row of 5

5. 5 rows of 4
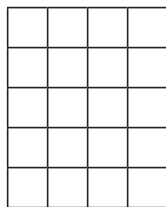
6. 5 rows of 9

_____   _____   _____
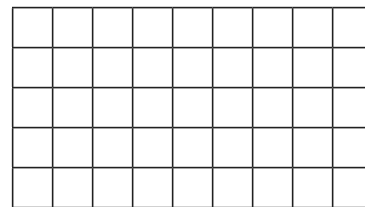
Problem Solving

7. Each pair of tennis shoes costs $25. If Andrea has four $5-bills, does she have enough money to buy one pair? Write a number sentence. Then solve.

_____

_____

8. For each balloon game you win at the fair, you get 5 tickets. Jamal won 9 balloon games. Gary won 6 balloon games. Do they have enough tickets altogether for a prize that is worth 100 tickets? Explain.
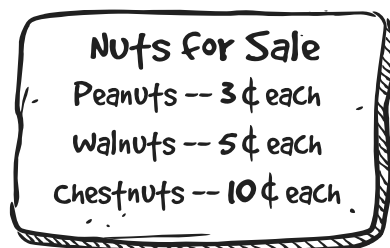
_____

Mathematical
9. PRACTICE **1** **Make Sense of Problems** For a craft, each student will need 5 rubber bands. There are 8 students. Rubber bands come in bags of 9. How many bags will be needed? How many rubber bands will be left over?

My Work!

Test Practice

10. Shawn has 4 nickels. How many walnuts can he buy if he spends all 4 nickels?

Ⓐ 1 walnut   Ⓒ 5 walnuts

Ⓑ 4 walnuts   Ⓓ 20 walnuts

Nuts for Sale
Peanuts -- 3¢ each
Walnuts -- 5¢ each
Chestnuts -- 10¢ each

Name ....

MY Homework

Lesson 5

Divide by 5

Homework Helper

eHelp
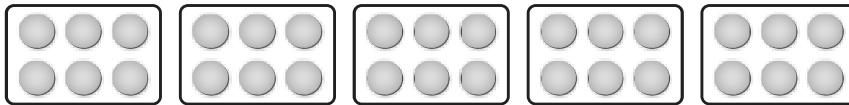
Need help? connectED.mcgraw-hill.com

Rudy spent $30 for 5 car models. Each model costs the same amount. How much did each car model cost?

Find $30 ÷ 5, or $5)\overline{\$30}$.

One Way **Use counters and partition.**
Partition 30 counters equally among 5 groups until there are none left.

There are 5 equal groups of 6.

Another Way **Use repeated subtraction.**
Subtract 5 until you get to 0. Count the number of times you subtracted.

①	②	③	④	⑤	⑥
30	25	20	15	10	5
− 5	− 5	− 5	− 5	− 5	− 5
25	20	15	10	5	0

Groups of 5 were subtracted 6 times.

Since $30 ÷ 5 = $6, each model cost $6.

Practice

Partition to find the number of equal groups or how many are in each group.

1. 45 counters

5 equal groups

_____ in each group

2. 5 counters

_____ equal groups

1 in each group

3. 20 counters

5 equal groups

_____ in each group

4. 50 counters

_____ equal groups

5 in each group

5. Algebra Draw an array and use the inverse operation to find the unknown.

    ■ × 5 = 15

    ? ÷ 3 = 5

    ■ = _____

    ? = _____

Problem Solving

Write a division sentence with a symbol for the unknown for Exercises 6 and 7. Then solve.

6. Antonio scored 40 points on his math test. There were 5 questions on the test, and each was worth the same number of points. How many points did Antonio score for each question?

_____

7. Lunch costs $5. Marcus has $35. How many days can he buy lunch?

_____

8. Mathematical **PRACTICE** 4 **Model Math** Today 25 girls and 20 boys rode their bikes to school. Each bike rack at school holds 5 bikes. How many bike racks were filled?

_____

Test Practice

9. Which number sentence represents this repeated subtraction exercise?

$$\begin{array}{c}20\\-\ 5\\\hline 15\end{array} \nearrow \begin{array}{c}15\\-\ 5\\\hline 10\end{array} \nearrow \begin{array}{c}10\\-\ 5\\\hline 5\end{array} \nearrow \begin{array}{c}5\\-\ 5\\\hline 0\end{array}$$

Ⓐ 20 ÷ 5 = 4   Ⓒ 20 − 20 = 0

Ⓑ 20 ÷ 2 = 10   Ⓓ 20 − 10 = 10

MY Homework

Homework Helper

eHelp

Need help? connectED.mcgraw-hill.com

**At the arcade, Kelly began with 48 tokens. She gave
24 to Kuri. Then she gave 12 to Tonya. If this pattern
continues, how many tokens will Kelly give away next?**

1 Understand
What facts do you know?
Kelly began with 48 tokens.
She gave away 24 tokens, then 12 tokens.

What do you need to find?
how many tokens Kelly will give away next

2 Plan
I will look for a pattern.

3 Solve
The pattern is 48, 24, 12, . . .

Each number is half as much as the one before it.

The pattern is divide by 2.

$12 \div 2 = 6$

So, Kelly will give away 6 tokens next.
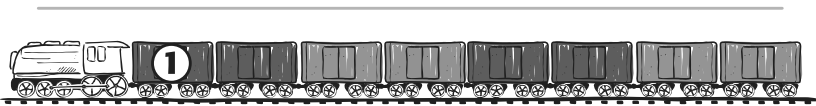
4 Check
Does the answer make sense?
Half of 12 is 6. The answer makes sense.

Problem Solving

Solve each problem by looking for a pattern.

1. Adam is lining up his toy train cars. If he continues this color pattern, what color will the 18th car be?

2. Marissa delivers newspapers on Highview Drive. The first house number is 950, the next is 940, and the third is 930. If the pattern continues, what will the next house number be?

3. Kyle is training for a bike race. He rides 5 miles one day, 10 miles the next day, and 15 miles the third day. If Kyle repeats this schedule, what is the total distance he will have ridden after 5 days?

4. The Hornets basketball team won their first game by 18 points, their second game by 15 points, and their third game by 12 points. If the pattern continues, by how many points will they win their fifth game?

5. Darcy wears brown pants to work one day, blue pants the next day, and a skirt on the third day. If this pattern continues every three days, what will she wear to work on the seventh day?

MY Homework

Homework Helper
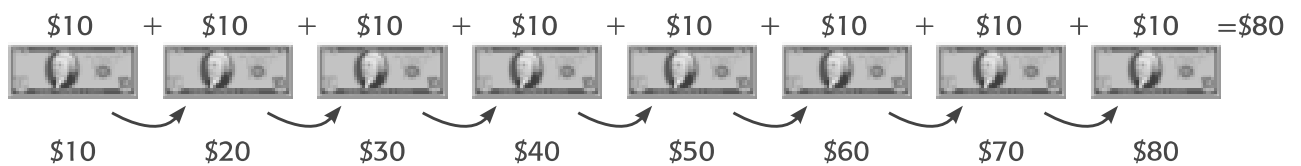
Need help? connectED.mcgraw-hill.com

There are 8 players on the tennis team. Each family contributes $10 toward a gift for the coach. What is the total amount collected for the coach's gift?

Find $8 \times \$10$.

Skip count by tens.

$10 + $10 + $10 + $10 + $10 + $10 + $10 + $10 =$80

$10 $20 $30 $40 $50 $60 $70 $80

So, the total amount collected from 8 families was $80.

Practice

Skip count by tens to find each product. Write the addition sentence.

1. $5 \times 10 =$ _____
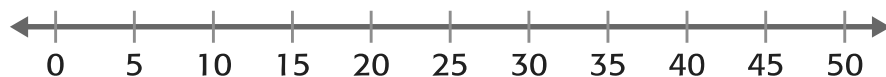
_____

2. $2 \times 10 =$ _____

_____

3. $7 \times 10 =$ _____

_____

4. $3 \times 10 =$ _____

_____

Algebra Use the number line to find each unknown.

```
◄──┼────┼────┼────┼────┼────┼────┼────┼────┼────┼────►
   0    5    10   15   20   25   30   35   40   45   50
```

5. ■ × 4 = 40

4 × ■ = 40

The unknown is _____.

6. 10 × ■ = 20

■ × 10 = 20

The unknown is _____.

7. 10 × ■ = 50

■ × 10 = 50

The unknown is _____.

Real World **Problem Solving**

For Exercises 8–9, write a multiplication sentence to solve.

8. Fiona's class went on a field trip to the art museum. The class rode in vans with 10 people in each van. How many people went on the field trip if they took 4 full vans?

_____

Mathematical
9. PRACTICE 5 **Use Math Tools** During the football game, Carlos ran with the ball 3 times. Each time, he ran 10 yards. How many yards did Carlos run altogether?

_____

10. Each time Allison goes to the recycling center, she takes 10 bags of cans. She will go twice this month, 3 times next month, and once the following month. How many bags of cans will Allison take to the recycling center in these three months?

_____

Test Practice

11. Byron has 70 pennies. He stacks them in groups of 10. How many stacks of pennies can Byron make?

Ⓐ 7 stacks   Ⓒ 9 stacks

Ⓑ 8 stacks   Ⓓ 10 stacks

MY Homework

Lesson 8

Multiples of 10

Homework Helper

Need help? connectED.mcgraw-hill.com

There are 3 shelves in the cabinet. Each shelf holds 40 cans. How many cans will fit in the cabinet?
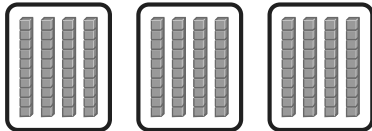
You need to find 3×40.

One Way Use a basic fact and patterns.

$3 \times 4 = 12$ ← basic fact

$3 \times 40 = 120$ ← pattern

Another Way Use place value.

Use base-ten blocks to model 3 groups of 4 tens.

3×4 tens $= 12$ tens; 12 tens $= 120$. ← Use repeated addition to check:
40 + 40 + 40 = 120

So, $3 \times 40 = 120$.

So, 120 cans will fit in the cabinet.

Practice

Multiply. Use place value.

1. $2 \times 40 =$

$2 \times$ _____ tens $=$ _____ tens

So, $2 \times 40 =$ _____ .

2. $5 \times 60 =$

$5 \times$ _____ tens $=$ _____ tens

So, $5 \times 60 =$ _____ .

3. $5 \times 30 =$

$5 \times$ _____ tens $=$ _____ tens

So, $5 \times 30 =$ _____ .

4. $10 \times 20 =$

$10 \times$ _____ tens $=$ _____ tens

So, $10 \times 20 =$ _____ .

Multiply. Use a basic fact.

5. $10 \times 3 = $ _____

So, $10 \times 30 = $ _____

6. $2 \times 9 = $ _____

So, $2 \times 90 = $ _____

7. $2 \times 8 = $ _____

So, $2 \times 80 = $ _____

8. $5 \times 5 = $ _____

So, $5 \times 50 = $ _____

Problem Solving

Write a multiplication sentence to solve.

9. Harlan has 5 antique watches. Each watch has a value of $90. How much are Harlan's watches worth in all?

10. **Mathematical PRACTICE** 1 **Keep Trying** Trey uses 40 nails to put up the frame around each window. There are 5 windows in the bedroom. How many nails will Trey use in the bedroom?

11. Chloe uses 80 candy wrappers to make a paper necklace. She is making necklaces for herself and 9 friends. How many candy wrappers will Chloe need?

Vocabulary Check

12. Circle the number sentence that shows 20 is a multiple of 2.

$2 \times 10 = 20$ $2 + 10 = 12$

$2 \times 5 = 10$ $10 \div 2 = 5$
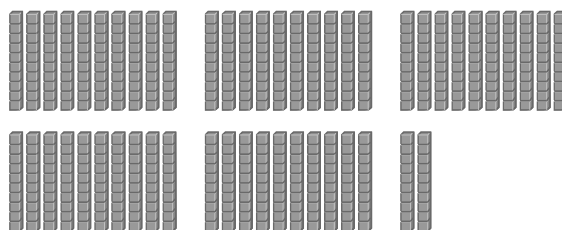
Test Practice

13. Which is equal to 52 tens?

Ⓐ 52,010   Ⓒ 5,200

Ⓑ 5,210   Ⓓ 520

MY Homework

Lesson 9

Divide by 10

Homework Helper

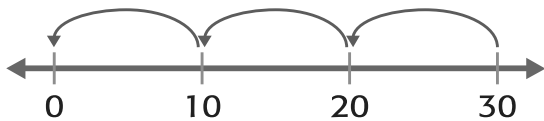*eHelp* Need help? connectED.mcgraw-hill.com

Ms. Mickle's classroom has 30 desks with 10 desks in each row. How many rows of desks are there?

Find 30 ÷ 10.
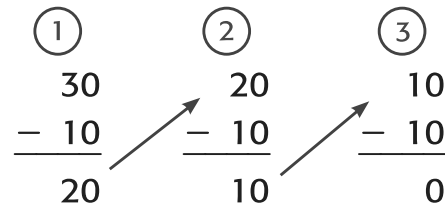
Subtract groups of 10 until you reach 0.

One Way Use a number line.

0   10   20   30

Another Way Use repeated subtraction.

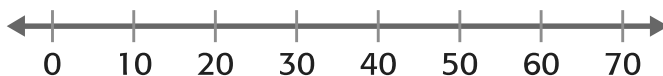| ①	②	③
30	20	10
− 10	− 10	− 10
20	10	0

3 groups of 10 were subtracted and you know that $10 \times 3 = 30$.

So, 30 ÷ 10 = 3. There are 3 rows of desks.

Practice

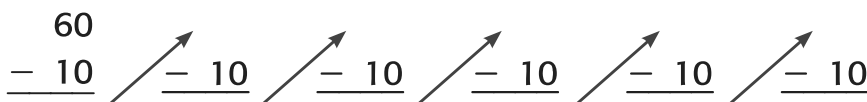**Use repeated subtraction to divide.**

1. 70 ÷ 10 = _____

0   10   20   30   40   50   60   70

2. 60 ÷ 10 = _____

60
− 10 / − 10 / − 10 / − 10 / − 10 / − 10

Algebra Use a related multiplication fact to find each unknown.

3. $80 \div 10 = \blacksquare$

$10 \times \underline{\hspace{2cm}} = 80$

The unknown is \underline{\hspace{1.5cm}}.

4. $\blacksquare \div 10 = 3$

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

The unknown is \underline{\hspace{1.5cm}}.

5. $\blacksquare \div 10 = 10$

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

The unknown is \underline{\hspace{1.5cm}}.

6. $20 \div 10 = \blacksquare$

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

The unknown is \underline{\hspace{1.5cm}}.

Problem Solving

7. Morgan has 90 cents in her pocket. All of the change is in dimes. How many dimes does Morgan have in all?

_____

8. Ricky spent $90 at the supermarket. He bought $30 worth of fruit. He spent the rest of the money on steaks. If he bought 10 steaks and they each cost the same amount, what was the price of each steak?

_____

9. **Mathematical PRACTICE 1** **Make Sense of Problems** Annie bought a bag of 80 mini-carrots. She eats 5 carrots with lunch each day and eats another 5 each night as a snack. In how many days will the bag of carrots be gone?

_____

Test Practice

10. Bill has a collection of 60 books he wants to donate to the library. Which number sentence shows how Bill can divide the books equally as he packs them in boxes?

Ⓐ $60 \div 6 = 10$

Ⓑ $60 - 10 = 50$

Ⓒ $60 + 60 + 60 = 180$

Ⓓ $60 \times 1 = 60$