

# Using Adding to Multiply

Goal

Multiply using skip counting and addition.

You will need

- counters

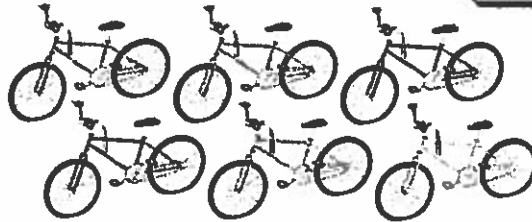


- number lines

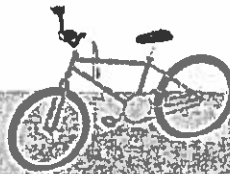


2,340

Lyn repairs bicycles.  
It takes her 1 minute to fill each tire on a bicycle.



? Can Lyn fill the tires on 7 bicycles in 15 minutes?



Lyn's Multiplication

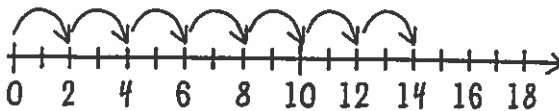
There are 7 groups of 2 tires. I can model the tires.



$$2 + 2 + 2 + 2 + 2 + 2 + 2 = 14$$

7 groups of 2 = 14

I can skip count by 2s on a number line.



7 skips of 2 = 14

I can write this **multiplication** sentence or fact.

$$7 \times 2 = 14$$

**factors**      **product**

It says 7 times 2 equals 14.

I can fill all the tires in less than 15 minutes.

**multiplication**

Repeated addition

**factors**

Numbers you multiply

**product**

The result when you multiply

2.341

## Reflecting

1. How are Lyn's multiplication sentence and addition sentence alike? How are they different?
2. a) Model 1 group of 7.  
b) Show 1 group of 7 on a number line.  
c) Write the multiplication sentence.  
Describe each part.  
d) Explain why it's easy to multiply by 1.

## Checking

3. There are 7 bicycles. Each bicycle has 5 streamers.  
a) How many streamers are there on 7 bicycles?  
Model your solution with counters and by skip counting on a number line.  
b) Write an addition sentence. Circle the sum.  
c) Write a multiplication sentence. Circle the product.



## Practising

4. Show 2 ways to find the total. Write an addition sentence and a multiplication sentence for each.



bicycle pedals



bicycle lights

5. Write each multiplication sentence.  
a) 6 groups of 2 hand grips      b) 5 groups of 4 brake pads
6. Calculate each product.  
a)  $7 \times 2 = \square$       c)  $5 \times 2 = \square$       e)  $6 \times 5 = \square$   
b)  $2 \times 7 = \square$       d)  $2 \times 5 = \square$       f)  $5 \times 6 = \square$
7. For  $4 \times 2 = \square$ , write a story and draw a picture.  
Write an addition sentence.

# Scaffolding for Lesson 1, Questions 4-7

STUDENT BOOK PAGES 218-219

2.347

4. Show 2 ways to find the total.

Write an addition sentence and a multiplication sentence for each.

a)



How many groups are there? \_\_\_\_\_

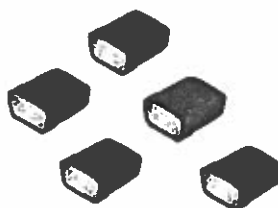
How many are in each group? \_\_\_\_\_

How many are there altogether? \_\_\_\_\_

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

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

b)



How many groups are there? \_\_\_\_\_

How many are in each group? \_\_\_\_\_

How many are there altogether? \_\_\_\_\_

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

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

5. Write each multiplication sentence.

a) 6 groups of 2 hand grips

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

b) 5 groups of 4 brake pads

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

6. Calculate each product.

a)  $7 \times 2 = \underline{\quad}$  Skip count by 2s seven times. How many are there? \_\_\_\_\_

b)  $2 \times 7 = \underline{\quad}$  Skip count by \_\_\_\_\_. How many are there? \_\_\_\_\_

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

Circle 5 groups of 2. How many are there? \_\_\_\_\_

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

Circle \_\_\_\_\_ groups of \_\_\_\_\_. How many are there? \_\_\_\_\_

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

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

7. For  $4 \times 2 = \square$ , write a story and draw a picture.

Write an addition sentence. You may use the back of this page.

Name: \_\_\_\_\_

Date: \_\_\_\_\_ 2.3.16

The page contains five vertical number lines, each with 20 horizontal tick marks. The first number line on the left has two circular punch holes on its left side. The other four number lines are blank.

# Solve Problems Using Guess and Test

2.348

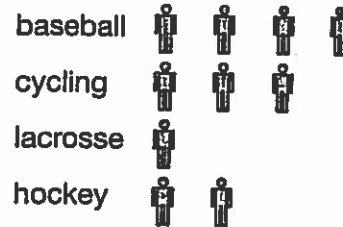


**Guess and test to solve problems.**

20 students in Devon's class picked a favourite sport. This pictograph shows the information.

? How many students does each represent?

**Favourite Sports for 20 Students**



Each means students.



## Devon's Solution

### Understand

20 students each picked 1 sport, but the graph doesn't have 20 . I have to figure out the **scale** for .

### Make a Plan

I can guess a number for and then test it by skip counting or multiplying.

### Carry Out the Plan

First I'll guess 5 for .

I'll check by skip counting.

That's going to be more than 20 people.

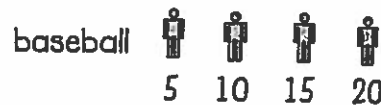
Next I'll try 2 for .

There are 10 . 10 groups of 2 is 20.

$$10 \times 2 = 20$$


The total number of students is 20.

That's correct, so means 2 students.




2.349

## Reflecting

1. Why is Devon's strategy called "guess and test"?
2. Why is Devon's 2nd guess for  a number less than 5?

## Checking

3. a) Guess the number of students each  represents.
- b) Test your guess. How many students chose each game? Show your work.


### Favourite Game for 30 Students

Concentration    

Fish  

Each  means  students.


## Practising

4. 60 students were surveyed about their favourite ice cream.
  - a) Guess the number of students each  represents.
  - b) Test your guess. How many students chose each flavour? Show your work.



### Favourite Ice Cream Flavour

chocolate     

vanilla 

Each  means  students.

5. Mia has less than \$1.00. 2 coins are pennies. She has more nickels than pennies. She has more dimes than nickels. What is the greatest number of dimes she could have?

6. Jordie and Mei-Ling forgot to show what  and  mean on their graphs.
  - a) Who seems to have read more books? Explain.
  - b) Create a different scale for each graph so that Jordie has read fewer books than Mei-Ling.
  - c) Create a different scale for each graph so that Jordie and Mei-Ling have read the same number of books.

#### Jordie's Books






fantasy     

#### Mei-Ling's Books

fantasy   

# Scaffolding for Lesson 2, Question 6

STUDENT BOOK PAGES 220–221

**Jordie's Books**  
fantasy     

**Mei-Ling's Books**  
fantasy   

6. Jordie and Mei-Ling forgot to show what  and  mean on their graphs.

a) Who seems to have read more books?

Guess the number of students each  represents.




I think each  means \_\_\_\_\_ students.

Guess the number of students each  represents.

I think each  means \_\_\_\_\_ students.

Test your guess. Show your work.

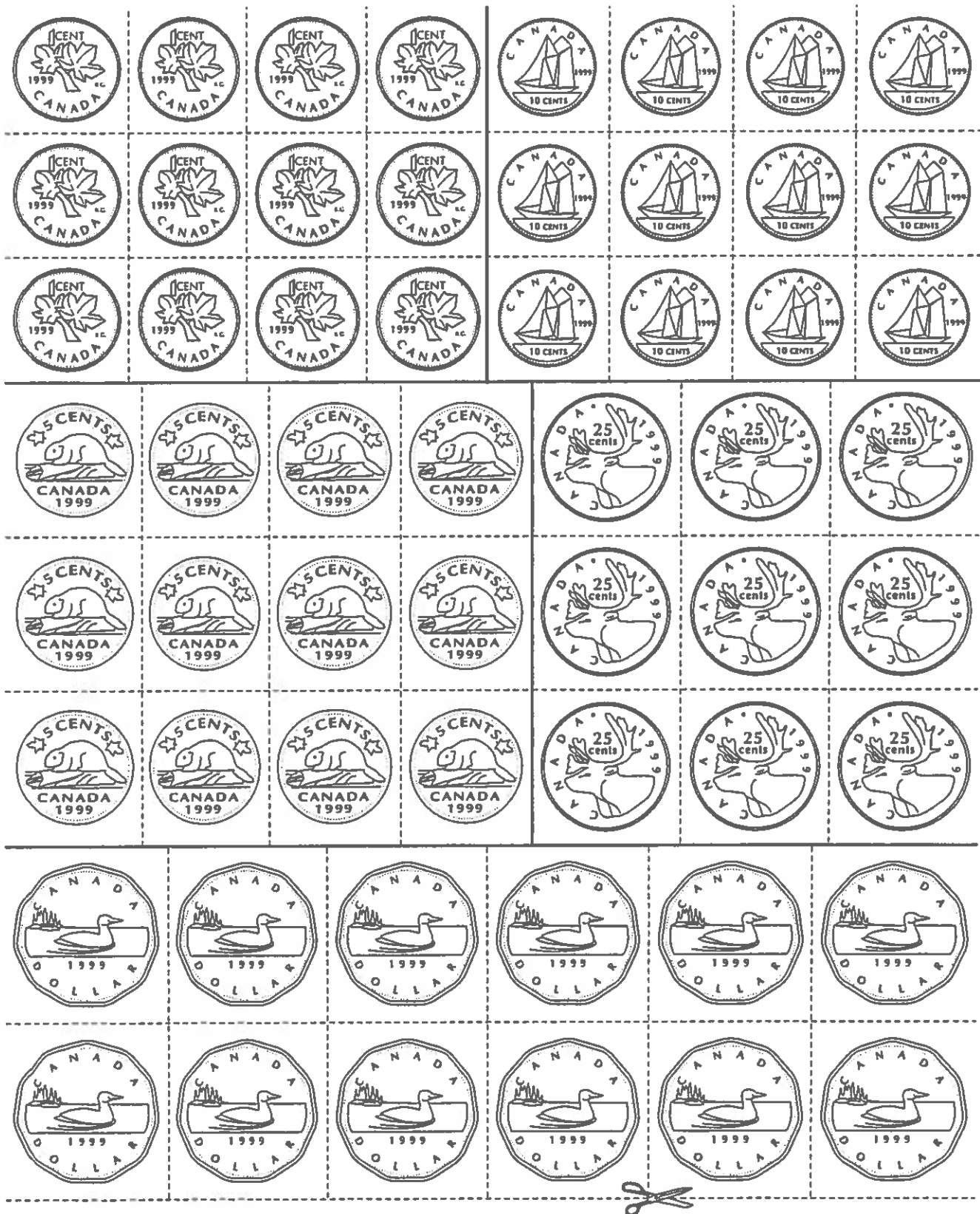
					Does it work?

			Does it work?

b) Create a different scale for each graph so that Jordie has read fewer books than Mei-Ling.

c) Create a different scale for each graph so that Jordie and Mei-Ling have read the same number of books.

2.355





# Arrays and Multiplication

You will need

- square tiles



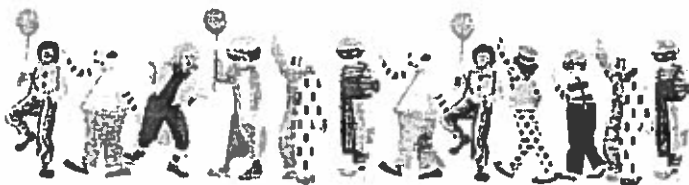
2.356

Goal

Use arrays to represent and solve multiplication problems.

12 clowns are marching in a parade.

? How can you arrange the clowns in equal rows?



Nisha's Solution

I can use 12 tiles to model the clowns.

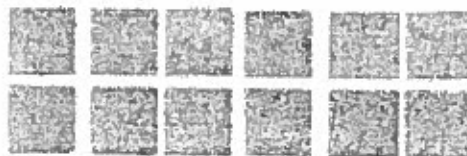
I can arrange them in 2 equal rows.

So, they could march in 2 rows of 6.

$$2 \times 6 = 12$$

If I look at my model sideways, I see 6 rows of 2.

$$6 \times 2 = 12$$



- Nisha's model is called an **array**. Make other arrays to represent the 12 clowns marching in equal rows. Sketch your arrays and write multiplication sentences.
- Compare your multiplication sentences. What do you notice about the products and factors?

**array**

A rectangular arrangement of objects or pictures

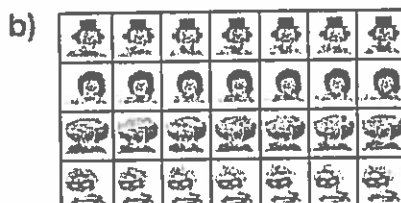
## Reflecting

- Why do you think  $2 \times 6 = 12$  and  $6 \times 2 = 12$  are called related multiplication sentences?
- How is an array with 2 rows of 6 like  $6 + 6$ ?
  - How is it like skip counting by 6s?

2.357

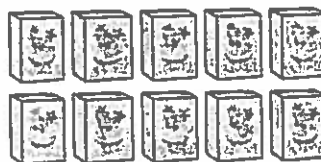
## Checking

3. Make as many arrays as you can for 14 clowns. Sketch your arrays and write related multiplication sentences.
4. Write 2 related multiplication facts for each array.  
How many stickers are in each array?



## Practising

5. Write 2 related multiplication facts for this array of boxes.



6. Write 2 related multiplication facts for this array of tomatoes.



7. Model 1 array for each. Sketch the array.  
Complete 2 related multiplication facts.

a)  $3 \times 6 = \square$       b)  $6 \times 4 = \square$       c)  $5 \times 3 = \square$

8. Sketch 1 array for each.  
Complete 2 related multiplication facts.

a)  $5 \times 4 = \square$       b)  $2 \times 4 = \square$       c)  $4 \times 7 = \square$

9. Model an array for  $1 \times 6$ .  
Write 2 related multiplication facts.

10. a) Sketch an array for  $3 \times 3$ . Write 1 multiplication fact.  
b) Turn your page sideways and look at the array.  
Write another multiplication fact.  
c) How many different multiplication facts fit the array?  
d) Show another array that behaves like the  $3 \times 3$  array.
11. a) Sketch all possible arrays for 13 clowns and 18 clowns.  
b) Which number has more arrays? Explain.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

2.362

## Scaffolding for Lesson 3, Questions 8–11

STUDENT BOOK PAGES 222–223

8. Sketch 1 array for each. Complete 2 related multiplication facts.

a)  $5 \times 4 = \blacksquare$  means \_\_\_\_\_ rows of \_\_\_\_\_.

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

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

b)  $2 \times 4 = \blacksquare$  means \_\_\_\_\_ rows of \_\_\_\_\_.

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

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

c)  $4 \times 7 = \blacksquare$  means \_\_\_\_\_ rows of \_\_\_\_\_.

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

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

9. Model an array for  $1 \times 6$ . Write 2 related multiplication facts.

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

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

10. a) Sketch an array for  $3 \times 3$ . Write 1 multiplication fact.

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

b) Turn your page sideways and look at the array.

Write another multiplication fact. \_\_\_\_\_  $\times$  \_\_\_\_\_ = \_\_\_\_\_

c) How many different multiplication facts fit the array? \_\_\_\_\_

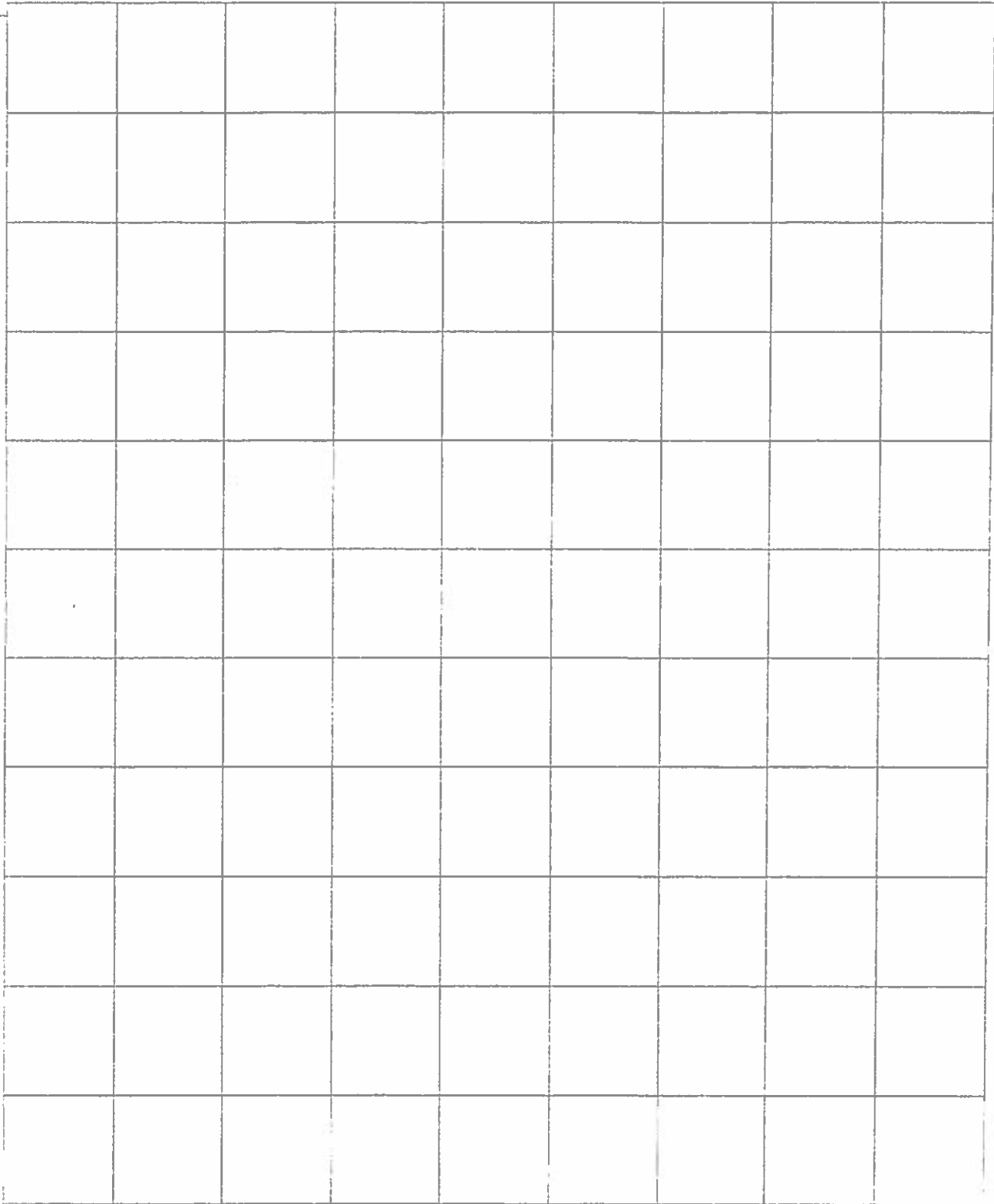
d) Show another array that behaves like the  $3 \times 3$  array.

11. a) On the back of this page, sketch all possible arrays for 13 clowns and 18 clowns.

b) Which number has more arrays? Explain.

2.363

Name: \_\_\_\_\_ Date: \_\_\_\_\_



# 4 Doubling

You will need

- counters



2.368

Goal

Relate multiplication facts using a doubling strategy.

Lee is a member of a Cub pack.  
There are 4 teams of 6 in the pack.

? How can Lee calculate the total number of members in his Cub pack?



Lee's Cub Pack

In 1 team of 6, there are 6 members.

$$1 \times 6 = 6$$

I'll **double** the number of teams.

$$2 \times 6 = 12$$

So, in 2 teams of 6, there are 12 members.  
Now I'll double the teams again.



**double**

Multiply a number by 2

- Finish Lee's solution. Double the number of teams again. Write the multiplication fact.
- How many members are in Lee's Cub pack?

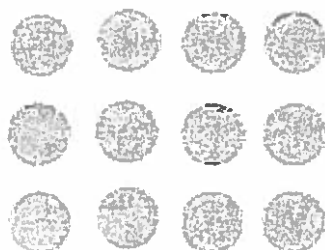
2, 369

## Reflecting

1. If you double one factor in a multiplication sentence, what happens to the product?
2. Does it matter which factor you double to make the product double? Explain with examples.
3. To multiply a number by 4, you can double it, then double the result. Explain.

## Checking

4. a) This array represents 3 sets of 4 badges.  
Sketch an array for 6 sets of 4 badges.  
b) How does your array show that  $6 \times 4$  is double  $3 \times 4$ ?
5. Use  $4 \times 3 = 12$  to calculate  $4 \times 6 = \square$ .



## Practising

6. a) Sketch an array to show  $3 \times 3$ .  
Write the multiplication fact.      b) Double the array in part a).  
Write the multiplication fact.
7. Complete each doubled fact.
 

a) $3 \times 3 = 9$ , so $3 \times 6 = \square$ .	d) $1 \times 6 = 6$ , so $2 \times 6 = \square$ .
b) $3 \times 2 = 6$ , so $3 \times 4 = \square$ .	e) $4 \times 2 = 8$ , so $4 \times 4 = \square$ .
c) $6 \times 2 = 12$ , so $6 \times 4 = \square$ .	f) $2 \times 7 = 14$ , so $4 \times 7 = \square$ .
8. How might you use doubling to find each product?
 

a) $6 \times 6 = \square$	b) $8 \times 3 = \square$	c) $8 \times 6 = \square$
---------------------------	---------------------------	---------------------------
9. Triplets are 3 children born at the same time.  
How many children are in 2 sets of triplets?  
How many children are in 4 sets of triplets?  
Write multiplication sentences.
10. How many socks are needed?
 

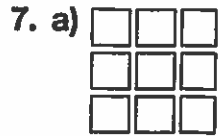
a) 3 sets of twins	b) 3 sets of quadruplets
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# Scaffolding for Lesson 4, Questions 7-10

STUDENT BOOK PAGES 226-227

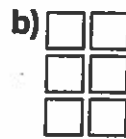


$$3 \times 3 = 9$$

$$\text{so } 3 \times 6 = \underline{\hspace{2cm}}$$

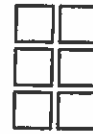


$$3 \times 3 = 9$$



$$3 \times 2 = 6$$

$$\text{so } 3 \times 4 = \underline{\hspace{2cm}}$$



$$3 \times 2 = 6$$

c)  $6 \times 2 = 12$

$6 \times 2 = 12$

$$\text{so } 6 \times 4 = \underline{\hspace{2cm}}$$

d)  $1 \times 6 = 6$

$1 \times 6 = 6$

$$\text{so } 2 \times 6 = \underline{\hspace{2cm}}$$

e)  $4 \times 2 = 8$ , so  $4 \times 4 = \underline{\hspace{2cm}}$ .

f)  $2 \times 7 = 14$ , so  $4 \times 7 = \underline{\hspace{2cm}}$ .

8. How might you use doubling to find each product?

a)  $6 \times 6 = \underline{\hspace{2cm}}$

$$3 \times 6 = \underline{\hspace{2cm}}, \text{ so } 6 \times 6 = \underline{\hspace{2cm}}.$$

b)  $8 \times 3 = \underline{\hspace{2cm}}$

$$\underline{\hspace{2cm}} \times 3 = \underline{\hspace{2cm}}, \text{ so } 8 \times 3 = \underline{\hspace{2cm}}.$$

c)  $8 \times 6 = \underline{\hspace{2cm}}$

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}, \text{ so } \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}.$$

9. Triplets are 3 children born at the same time.

How many children are in 2 sets of triplets?

How many children are in 4 sets of triplets?

Write multiplication sentences.

10. How many socks are needed for each?

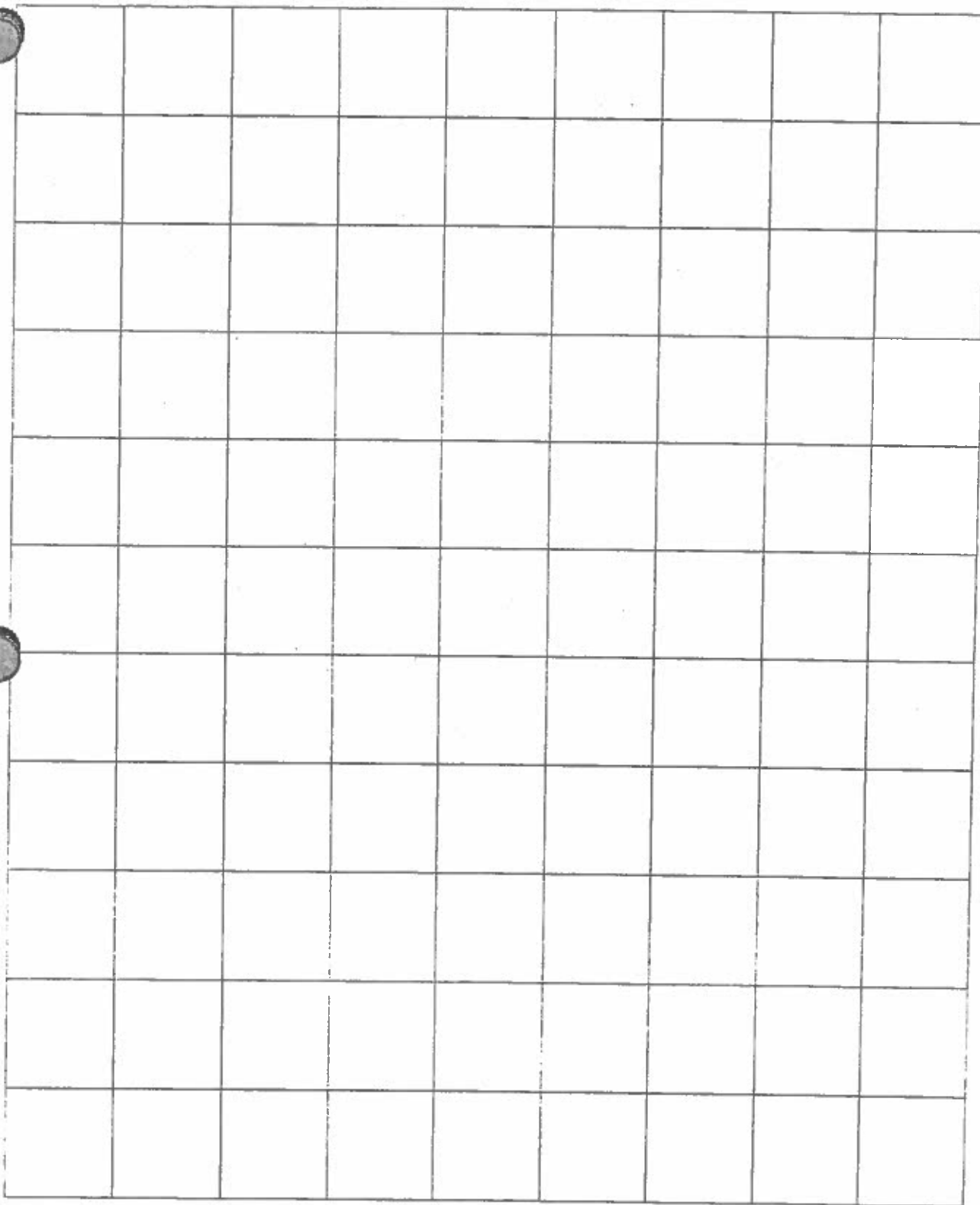
a) 3 sets of twins

b) 3 sets of quadruplets



Name: \_\_\_\_\_ Date: \_\_\_\_\_

2.382





2.377

## Reflecting

1. How did Keisha use her answers to  $5 \times 5$  and  $2 \times 5$  to find  $7 \times 5$ ?
2. What is another way to calculate  $7 \times 5$  using facts you know?

## Checking

3. Complete the multiplication facts.

a)  $5 \times 7 = 35$        $2 \times 7 = 14$       So  $7 \times 7 = \boxed{49}$

- b) 5 groups of 6 is 30.  
2 groups of 6 is 12.  
So  $\boxed{7}$  groups of 6 is  $\boxed{42}$ .

4. You know  $7 \times 5 = 35$ .  
How does that help you to find  $7 \times 6$ ?

## Practising

5. Model arrays as Keisha did. Show how to calculate each product by using 2 arrays.

a)  $7 \times 4 = \boxed{28}$       b)  $6 \times 6 = \boxed{36}$

6. Jodi delivered flyers every day for 4 weeks in March and 3 weeks in April.  
How many days did she work altogether?  
Complete the multiplication sentences.

March						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

$\boxed{28} \times 7 = \boxed{196}$       So  $\boxed{36} \times 7 = \boxed{252}$

7. You know  $4 \times 3 = 12$ .  
a) How does that help you to know  $4 \times 6$ ?  
b) How does that help you to know  $4 \times 7$ ?
8. For every year a dog lives, it ages about 7 human years. Marty's dog is 6 years old.  
How old is Marty's dog in human years?

# Relating Multiplication Facts

You will need

- counters



2.376

**Goal** Show different ways to multiply.

For her 9th birthday, Keisha got a kitten named Lucky.  
Cats age more quickly than humans.  
For every year a cat lives, it ages  
about 5 human years.

**? When Keisha is 16, how old  
will Lucky be in human years?**

A year from now, I'll be  
10 and Lucky will be  
about 5 in human years!



## Keisha's Solution

I will be 16 human years old in 7 years.

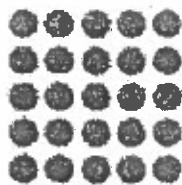
Lucky will be 7 cat years old in 7 years.

1 cat year = 5 human years

Lucky will be  $7 \times 5$  years old in human years.

I can use facts I know to calculate  $7 \times 5$ .

5 groups of 5 is 25.



2 groups of 5 is 10.



$25 + 10 = 35$

So 7 groups of 5 is 35.

When I turn 16, Lucky will be about 35 in  
human years!

**Scaffolding for Lesson 5, Questions 6-8**

STUDENT BOOK PAGES 228-229

6. Jodi delivered flyers every day for 4 weeks in March and 3 weeks in April.  
How many days did she work altogether?

Complete the multiplication sentences.

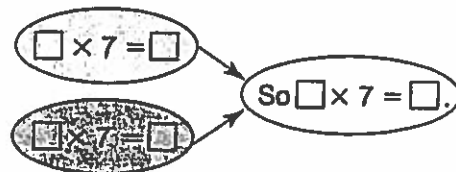
March						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

April						
S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

7. You know  $4 \times 3 = 12$ .

a)  $4 \times 6 =$  \_\_\_\_\_. Explain how you know.

b)  $4 \times 7 =$  \_\_\_\_\_. Explain how you know.



8. For every year a dog lives, it ages about 7 human years.  
Marty's dog is 6 years old.  
How old is Marty's dog in human years?

1 dog year = 7 human years

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I know that \_\_\_\_\_  $\times 7 =$  \_\_\_\_\_.

I know that \_\_\_\_\_  $\times 7 =$  \_\_\_\_\_.

So  $6 \times 7 =$  \_\_\_\_\_.

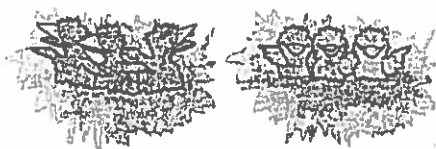
## LESSON

# Mid-Chapter Review

1. Model each group.

Write an addition sentence and a multiplication fact.

a)



b)



2. What is the value of 7 nickels? Show your work.

3. Guess the number of students each  represents.

Test your work.

Show your work.

### Favourite Pets of 21 Students

cats  

gerbils 

dogs    

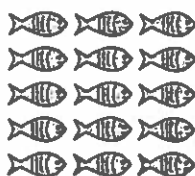
Each  means  students.

4. Write 2 related multiplication facts to match each array.

a)



b)



5. Sketch an array. Complete each multiplication fact.

a)  $2 \times 7 = \square$

b)  $5 \times 4 = \square$

c)  $6 \times 1 = \square$

6. Find the total number of objects. Use any method.

a) 3 rows of stickers with 6 stickers in each row

b) 6 stacks of pennies with 5 pennies in each stack

7. Which multiplication facts are incorrect?

Explain how you know.

a)  $2 \times 5 = 7$

b)  $3 \times 4 = 12$

c)  $1 \times 3 = 13$

## 6

# Making a Multiplication Table

Goal

Use strategies to complete a multiplication table.

? What are the missing numbers in the multiplication table?



Ben's Table

I show multiplication facts in a table.

I know 3 groups of 2 is 6.

row →

column  
↓

x	1	2	3	4	5	6	7
1							
2							
3		6					
4							
5							
6							
7							

You will need

- a multiplication table

x	1	2	3
1			
2			
3			

- counters



- a number line



2.384

- Which numbers in the multiplication table are factors?
- What are the factors for the product, 6, that Ben showed?
- Complete a row. How does a row show skip counting?
- Complete a column. How does a column show skip counting?
- Complete the table.
- Talk about the strategies you used.

2.385

## Reflecting

1. Talk about the strategies and patterns you used to complete the table.
2. Look at the products for 2s and 1s. How can they help you to figure out the products for 3s?
3. How can the products for 3s help you to figure out the products for 6s?

## Mental Math

### Mental Subtraction

Rachel calculated  $70 - 7$  by thinking of 10 minus 7.



#### Rachel's Method

I think of 70 as  $60 + 10$ .       $70 - 7 = 60 + 10 - 7$   
 10 minus 7 is 3.                       $= 60 + 3$   
     $= 63$

A. How can you use Rachel's method to subtract 7 from 60?

#### Try These

1. Use Rachel's mental math method to subtract.

- a)  $50 - 7 = \square$     c)  $60 - 6 = \square$     e)  $80 - 8 = \square$     g)  $30 - 3 = \square$   
 b)  $30 - 7 = \square$     d)  $50 - 5 = \square$     f)  $40 - 4 = \square$     h)  $100 - 2 = \square$

## Chapter Review

- 

- b)

- 

- 
- A decorative element consisting of 18 stars arranged in three rows of six.

- a)  $4 \times 2 = 8$       c)  $3 \times 5 = 15$       e)  $6 \times 2 = 12$       g)  $3 \times 7 = 21$   
b)  $4 \times 4 = 16$       d)  $6 \times 5 = 30$       f)  $6 \times 4 = 24$       h)  $6 \times 7 = 42$

- a)  $6 \times 4 = 4 \times \square$       b)  $7 \times 1 = \square$       c)  $3 \times 3 = 9$   
 $7 \times 5 = \square$        $3 \times 6 = \square$   
 $7 \times 6 = \square$

6. Rebecca bought 7 packages of tennis balls. How many tennis balls did she buy? Show your work.

## Problem Bank

2.392

1. Which would have more medallions:

4 of Lee's pouches or  
3 of Robin's pouches?

How many more?

Show your work.



Lee's  
pouches



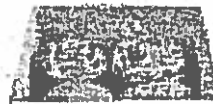
Robin's  
pouches

2. Paul's class has 26 students.  
He needs 1 muffin for each student.

Paul buys 7 packages of 4 muffins.

Does he have enough muffins?

Show your work.



3. Write and solve a problem about  $6 \times 5$ .



4. a) Use toothpicks to make 4 triangles.  
b) How many toothpicks did you use?  
c) Could you have used fewer toothpicks? Explain.

5. The product of 2 numbers is 12. The difference  
between the numbers is 4. What are the numbers?

6. Ananda is thinking of 2 numbers.  
She says the sum of the numbers is 7.  
What is their product? Find all the possibilities.

7. A bookstore gives away a  
bookmark with each book sold.  
How many bookmarks has the  
store given away?

### Number of Books Sold

picture books



Inuit stories



science books



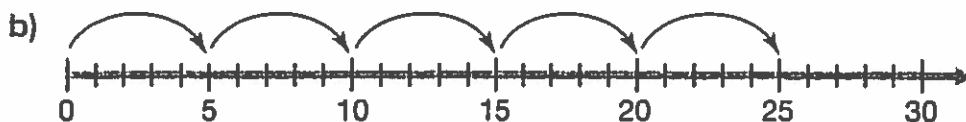
Each  means 5 books.



## Skills Bank

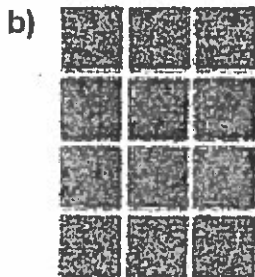
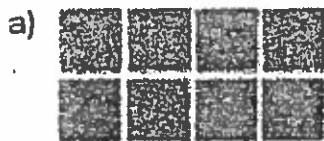
### LESSON

1. Write an addition sentence and a multiplication fact for each.



- c) 5 groups of 4  
d) 3 groups of 7

2. Write 2 related multiplication facts to match each array.



3. Complete the sentence.

a) If I know that  $7 \times 5 = 35$ , then I know that  
 $5 \times \square = 35$ .

b) If I know that  $6 \times 7 = 42$ , then I know that  
 $\square \times 6 = 42$ .

4. Multiply. Then write a related fact.

- a)  $6 \times 3 = \square$     c)  $1 \times 5 = \square$     e)  $5 \times 2 = \square$     g)  $3 \times 5 = \square$   
b)  $3 \times 2 = \square$     d)  $2 \times 7 = \square$     f)  $5 \times 7 = \square$     h)  $6 \times 2 = \square$

5. Multiply.

- a)  $3 \times 3 = \square$     b)  $6 \times 6 = \square$     c)  $4 \times 4 = \square$     d)  $1 \times 1 = \square$

2.391

6. Complete each multiplication fact.

a)  $2 \times 7 = 14$

c)  $3 \times 3 = 9$

e)  $7 \times 3 = 21$

g)  $3 \times 4 = 12$

$4 \times 7 = \square$

$3 \times 6 = \square$

$7 \times 6 = \square$

$6 \times 4 = \square$

b)  $3 \times 5 = 15$

d)  $6 \times 2 = 12$

f)  $5 \times 2 = 10$

h)  $2 \times 4 = 8$

$6 \times 5 = \square$

$6 \times 4 = \square$

$5 \times 4 = \square$

$4 \times 4 = \square$

7. Kayla has a storybook about 5 sets of quadruplets.

There are 2 girls and 2 boys in each set.

a) Write a multiplication sentence for the number of girls.

b) Write a multiplication sentence for the number of children.



8. Complete each multiplication fact.

a)  $1 \times 6 = 6$

c)  $2 \times 6 = 12$

e)  $2 \times 3 = 6$

$5 \times 6 = 30$

$2 \times 6 = 12$

$3 \times 3 = \square$

So  $6 \times 6 = \square$ .

So  $4 \times 6 = \square$ .

So  $5 \times 3 = \square$ .

b)  $1 \times 5 = 5$

d)  $4 \times 7 = 28$

f)  $3 \times 5 = 15$

$5 \times 5 = 25$

$3 \times 7 = \square$

$4 \times 5 = \square$

So  $6 \times 5 = \square$ .

So  $7 \times 7 = \square$ .

So  $7 \times 5 = \square$ .

9. How many are there altogether?

a) 3 rows of 6 stamps

d) number of days in 7 weeks

b) 4 canoes with 4 paddles in each

e) 7 pairs of snowshoes

c) 5 bags with 5 pennies in each

f) 5 sets of triplets

# Chapter 9 Test Page 1

1. Write a multiplication fact for each picture.



2. There are 13 students in the art class.  
Paintbrushes come in packs of 2 or 3.  
How many of each pack are needed if  
each student needs only 1 paintbrush?



**Chapter 9 Test** Page 2

3. Write 2 related multiplication facts to match this array.



How many circles are there? \_\_\_\_\_

4. Calculate each product.

a)  $5 \times 2 = \underline{\quad}$       d)  $6 \times 6 = \underline{\quad}$       g)  $4 \times 3 = \underline{\quad}$

b)  $5 \times 4 = \underline{\quad}$       e)  $7 \times 2 = \underline{\quad}$       h)  $4 \times 6 = \underline{\quad}$

c)  $3 \times 6 = \underline{\quad}$       f)  $7 \times 4 = \underline{\quad}$

5. Complete each number sentence.

a)  $7 \times 6 = 6 \times \underline{\quad}$       b)  $3 \times 3 = \underline{\quad}$       c)  $3 \times 7 = 21$

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

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

6. Henri washed 7 pairs of socks.  
How many socks did he wash?

