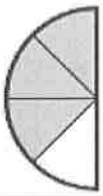
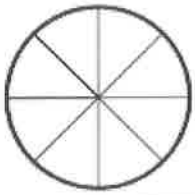
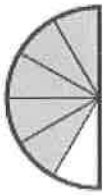
NAME DATE TIME

Unit 5 Study Guide (Grade 3)

SKILLS	SIMILAR PROBLEMS
① Represent fractions with pictures, words, and numbers.	**Complete the table.**

Picture	Words	Number
Example: 	three-fourths or 3-fourths	$\frac{3}{4}$
1.		
2. 	three-eighths	
3. 		
4.		$\frac{2}{3}$

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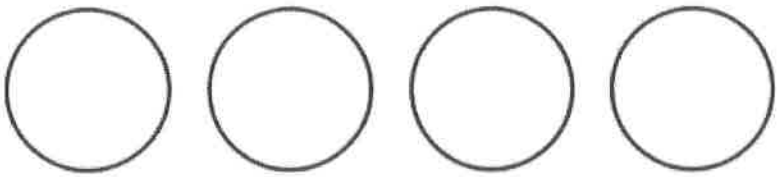
② Find equivalent fractions using fraction circle pieces.

❶ Partition each circle in the name-collection box to show different ways to represent $\frac{1}{2}$. Then add other equivalent fraction names.

1-half



❷ Add other equivalent fraction names.

1-fourth

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③ Use doubling to help solve other facts.	❶ The art table is 2 feet wide and 9 feet long. What is the area of the art table? Draw a sketch of the art table and write a number model to show how you solved the problem. Number model: _____ feet × _____ feet = _____ square feet ❷ A new art table is 4 feet wide and 9 feet long. Use doubling and your number model from Problem 1 to find the new area. Sketch and write number models to show your work below. (*Hint:* Add on to your first drawing.) Number model: _____ feet × _____ feet = _____ square feet
④ Use multiplication squares to help solve other facts.	Add or subtract a group from a multiplication square helper fact to solve the near-squares fact. Use drawings, words, or numbers to explain your thinking. ❶ Near-squares fact: $3 \times 4 = ?$ Multiplication square helper fact: _____ How I solved it: $3 \times 4 =$ _____ ❷ Near-squares fact: $7 \times 6 = ?$ Multiplication square helper fact: _____ How I solved it: $7 \times 6 =$ _____

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⑤ Identify patterns in products and explain them.

Complete the following questions. Support your answer by giving 3 example facts.

❶ If both factors are even numbers, is the product odd or even? _____

❷ If both factors are odd numbers, is the product odd or even? _____

❸ If one factor is even and the other is odd, is the product odd or even?

_____

Complete the table of 6s multiplication facts below.

Fact	Product
1 x 6	
2 x 6	
3 x 6	
4 x 6	

What patterns do you notice in the products?

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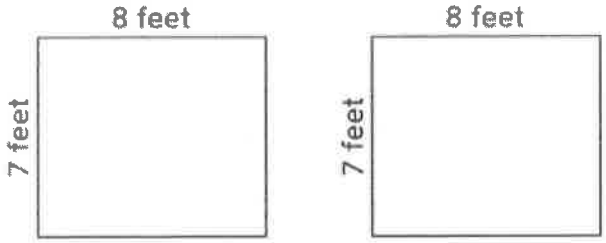
⑥ Break apart a factor to make two easier facts.

❶ You have a rectangular garden that is 7 feet wide and 8 feet long. You decide to plant flowers in one section and vegetables in another. Sketch at least two different ways you can partition, or divide, your garden into two rectangular sections. Label the side lengths of each of your new rectangles.

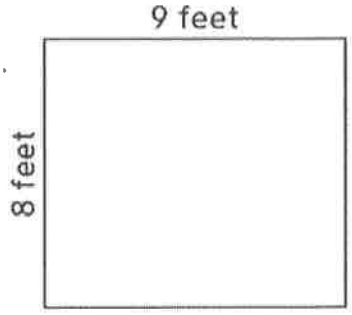


Write a number model using easier helper facts for one of your ways.

$7 \times 8 =$ _____ $\times$ _____ $+$ _____ $\times$ _____ $7 \times 8 =$ _____

❷ Your friend wants to solve 8×9. You suggest that she imagine a garden that is 8 feet wide and 9 feet long. Help her break 8×9 into two smaller helper facts using the rectangular garden.

Show one way to break apart the 8-by-9 foot garden.



I will break apart the factor _____ into

_____ and _____.

The factor _____ will stay the same.

Show what you did on the rectangle.

Helper facts that match the areas of the smaller rectangles:

_____ $\times$ _____ $=$ _____ and _____ $\times$ _____ $=$ _____

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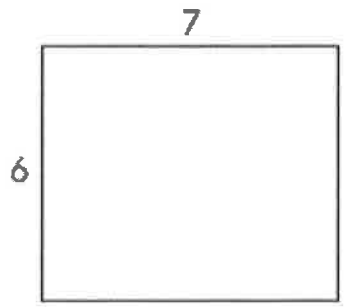
❸ Break apart one of the factors to solve $7 \times 6 = ?$.

I will break apart the factor _____ into _____ and _____ .

Show what you did on the rectangle.

$7 \times 6 =$ _____