

Name _____

Numerical Patterns



COMMON CORE STANDARD—5.OA.3
Analyze patterns and relationships.

Complete the rule that describes how one sequence is related to the other. Use the rule to find the unknown term.

1. Multiply the number of laps by 50 to find the number of yards.

Think: The number of yards is 50 times the number of laps.

Swimmers	1	2	3	4
Number of Laps	4	8	12	16
Number of Yards	200	400	600	800

2. Multiply the number of pounds by _____ to find total cost.

Boxes	1	2	3	4	6
Number of Pounds	3	6	9	12	18
Total Cost (\$)	12	24	36	48	

3. Multiply the number of hours by _____ to find the number of miles.

Cars	1	2	3	4
Number of Hours	2	4	6	8
Number of Miles	130	260	390	

4. Multiply the number of hours by _____ to find the amount earned.

Days	1	2	3	4	7
Number of Hours	8	16	24	32	56
Amount Earned (\$)	96	192	288	384	

Problem Solving

5. A map's key shows that every 5 inches on the map represents 200 miles of actual distance. Suppose the distance between two cities on the map is 7 inches. What is the actual distance between the two cities? Write the rule you used to find the actual distance.

6. To make each costume, Rachel uses 6 yards of material and 3 yards of trim. Suppose she uses a total of 48 yards of material to make several costumes. How many yards of trim does she use? Write the rule you used to find the number of yards of trim.

Lesson Check (5.OA.3)

Use the table below to answer questions 1 and 2.

Term Number	1	2	3	4	...	6
Sequence 1	4	8	12	16	...	24
Sequence 2	12	24	36	48	...	?

1. What rule could you write that relates Sequence 2 to Sequence 1?

2. What is the unknown number in Sequence 2?

Spiral Review (5.OA.1, 5.NBT.1, 5.NF.2, 5.NF.3)

3. What is the value of the following expression?

$$40 - (3 + 2) \times 6$$

4. What is the value of the digit 9 in the number 597,184?

5. What is the best estimate for the sum of $\frac{3}{8}$ and $\frac{1}{12}$?

6. Terry uses 3 cups of pumpkin seeds to decorate the tops of 12 loaves of bread. She puts an equal amount of seeds on each loaf. How many cups of pumpkin seeds does she put on each loaf of bread?

Name _____

Problem Solving • Find a Rule



COMMON CORE STANDARD—5.OA.3
Analyze patterns and relationships.

Write a rule and complete the table. Then answer the question.

1. Faye buys 15 T-shirts, which are on sale for \$3 each. How much money does Faye spend?

Number of T-Shirts	1	2	3	5	10	15
Amount Spent (\$)	3	6	9			

Possible rule:

Multiply the number
of T-shirts by 3.

The total amount Faye spends is **\$45**.

2. The Gilman family joins a fitness center. They pay \$35 per month. By the 12th month, how much money will the Gilman family have spent?

Number of Months	1	2	3	4	5	12
Total Amount of Money Spent (\$)	35	70				

Possible rule:

The Gilman family will have spent _____.

3. Hettie is stacking paper cups. Each stack of 15 cups is 6 inches high. What is the total height of 10 stacks of cups?

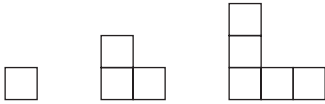
Number of stacks	1	2	3	10
Height (in.)	6	12	18	

Possible rule:

The total height of 10 stacks is _____.

Lesson Check (5.OA.3)

1. How many squares are needed to make the eighth figure in the pattern?



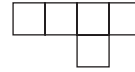
2. What expression could describe the number of squares in the next figure in the pattern, Figure 4?

Figure 1



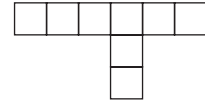
2 squares

Figure 2



5 squares

Figure 3



8 squares

Spiral Review (5.OA.3, 5.NBT.2, 5.NBT.7, 5.NF.2)

3. Talia stores her collection of stickers equally in 7 sticker albums. If she has 567 stickers, how many stickers are in each album?

4. Ms. Angelino made 2 pans of lasagna and cut each pan into twelfths. Her family ate $1\frac{1}{12}$ pans of lasagna for dinner. How many pans of lasagna were left?

5. What is the next number in this pattern?

0.54, 0.6, 0.66, 0.72, ■, ...

6. How do you write 100 as a power of 10?

Name _____

Graph and Analyze Relationships

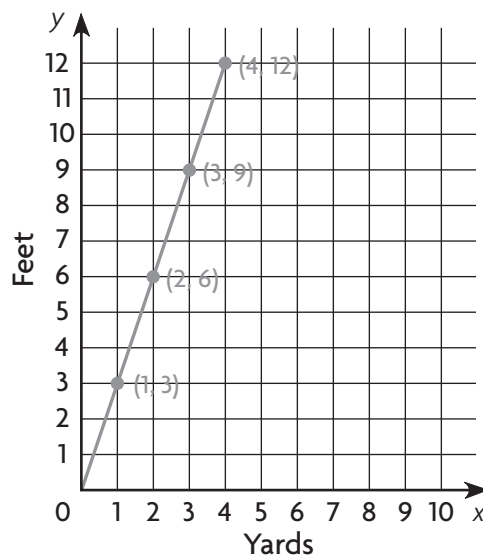


COMMON CORE STANDARD—5.OA.3,
5.G.2 Analyze patterns and relationships.

Graph and label the related number pairs as ordered pairs.
Then complete and use the rule to find the unknown term.

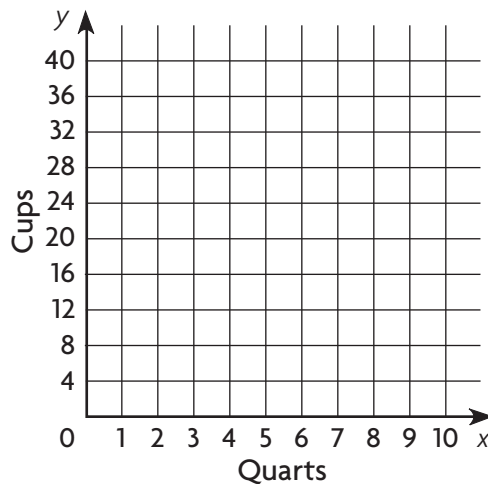
1. Multiply the number of yards by 3 to find the number of feet.

Yards	1	2	3	4
Feet	3	6	9	12



2. Multiply the number of quarts by _____ to find the number of cups that measure the same amount.

Quarts	1	2	3	4	5
Cups	4	8	12	16	



Problem Solving



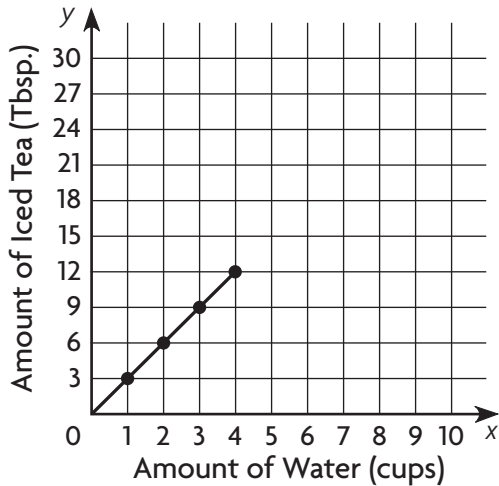
3. How can you use the graph for Exercise 2 to find how many cups are in 9 quarts?

4. How many cups are equal to 9 quarts? _____

Lesson Check (5.OA.3)

Use the data to complete the graph. Then answer the questions.

Paola is making a pitcher of iced tea. For each cup of water, she uses 3 tablespoons of powdered iced tea mix.



- Fill in the missing number to complete the following rule.

Multiply the amount of iced tea mix by _____ to get the amount of water.

- Suppose Paola uses 18 tablespoons of iced tea mix. How many cups of water does she need to use?

Spiral Review (5.NBT.2, 5.NBT.6, 5.NBT.7)

- A biologist counted 10,000 migrating monarch butterflies. How do you express 10,000 as a power of 10?

- Find the quotient. Write your answer using a decimal and round to the nearest hundredth.

$$8,426 \div 82$$

- What is $54.38 + 29.7$?

- On a certain day, \$1 is worth 30.23 Russian rubles. Omar has \$75. How many rubles will he get in exchange?
