

Name: _____ Section: _____



Homework

Greetings Scholar and Parents. We will focus our efforts this week on Chapter 17, *Graphs and Patterns*. Scholars will learn how to determine mathematical patterns and plot them along graphs like the cartesian plane. Please complete homework daily based on the schedule provided below.

Extra Practice

Additional practice for the daily lessons is available on IXL. To access extra practice, please have your child login into IXL. Under the **“What should I work on”** section, scholars will find Teacher Assigned Lessons. From there, you will see a list of lessons reinforcing the daily skills.

- [Complete an input/output table](#)
- [Complete a table for a two-variable relationship](#)
- [Input/output tables: find the rule](#)
- [Find pattern rules from graphs](#)
- [Graph patterns using rules](#)
- [Use a rule to complete a table and a graph](#)

Notes

Completed homework packets should be uploaded or turned in on **Sunday, February 16th**. Students must prove and show all their work in the provide space. Scholars should use a separate sheet of paper if they need additional space. Failure to show work or packets submitted after the due date will result in a lower grade. If a scholar struggles with a lesson, they can review the daily lesson on HMH. Please feel free to contact me with any questions or concerns at peter.vanegas@archimedean.org.

<u>Monday</u>	Feb 10 th	– HMH Diagnostic; No additional work.
<u>Tuesday</u>	Feb 11 th	– 17.1
<u>Wednesday</u>	Feb 12 th	– 17.2
<u>Thursday</u>	Feb 13 th	– 17.4
<u>Friday</u>	Feb 14 th	– 17.5

Record Inputs and Outputs in a Two-Column Table

Go Online

Interactive Examples

Use the rule to make an input/output table.
Include four input/output pairs in your table.

1. **Rule:** The output is $a + 5$.2. **Rule:** The output is $3c$.3. **Rule:** The output is $d \times 6$.4. **Rule:** The output is $10 + b$.5. **Rule:** The output is $8e$.6. **Rule:** The output is $12f$.7. **Rule:** The output is $8 + 2g$.8. **Rule:** The output is $k \times 2$.

Problem Solving

9. Suki uses toothpicks to build a number of separate shapes for her math project. She uses 1 toothpick for each side of a shape. Complete the input/output table to show how many toothpicks Suki needs to make 6 hexagons.

Input	Hexagons	h	1	2	3	4	5	6
Output	Toothpicks	t						

Lesson Check

Fill in the bubble completely to show your answer.

10. If c is cups of sugar and b is number of batches of cookies, which rule matches the information in the table?

Input	Batches	b	2	3	4
Output	Cups	c	4	6	8

- (A) The output is $b \times 2$.
- (B) The output is $c \times 2$.
- (C) The output is $b + 2$.
- (D) The output is $c + 2$.
12. Harlan uses the pattern rule $l = d + 2$ to represent the number of laps she swims each day for a week. Which is the number of laps she swims on the sixth day?

Input	Day	d	1	2	3
Output	Laps	l	3	4	5

- (A) 6
- (B) 7
- (C) 8
- (D) 9

11. Tia hangs chili-shaped party lights in her back yard. The rule $c = 14f$ gives the number of chili lights c there are for each foot f of wire. How many lights are on 8 feet of wire?

- (A) 126
- (B) 112
- (C) 98
- (D) 96

13. Gage uses the equation $e = 25b$ to determine how much he earns for selling hand-carved bowls at the craft fair. If b represents the number of bowls sold and e represents his earnings, how much will Erik earn if he sells 9 bowls?

Number of bowls	1	2	3
Earnings	\$25	\$50	\$75

- (A) \$225
- (B) \$100
- (C) \$150
- (D) \$45

Write a Rule for Number Patterns in Tables

Go Online

Interactive Examples

Find the rule to describe the pattern in the table. Decide if the rule is additive or multiplicative.

1.

Input	Output
m	n
1	11
2	22
3	33
4	44

The rule is _____.

Rule: _____

2.

Input	d	3	5	7	9
Output	f	7	9	11	13

The rule is _____.

Rule: _____

3.

Input	p	2	3	4	5
Output	q	30	45	60	75

The rule is _____.

Rule: _____

4.

Input	Output
s	t
4	10
6	12
8	14
10	16

The rule is _____.

Rule: _____

Problem Solving

5. Marco pours 12 ounces of cranberry juice into a punch bowl. He uses a container to add sparkling water to the bowl one ounce at a time. Write a rule to show the pattern and use it to calculate how many ounces of liquid Marco will have in the bowl after adding 8 containers of sparkling water.

Lesson Check

Fill in the bubble completely to show your answer.

6. The winning entry in the inventors' competition was a robot made with wheels, gears, and bolts. Using the table shown below, how many bolts are needed to make 7 robots?

Number of robots	1	2	3	4
Wheels	4	8	12	16
Gears	3	6	9	12
Bolts	8	16	24	32

- (A) 40 (C) 28
(B) 21 (D) 56
8. The equation $c = \$0.75p$ represents the cost of mailing a package for each pound, where c is the cost and p is the number of pounds. If Leila mails a package that weighs 5 pounds, what is the total cost?
- (A) \$3.00
(B) \$4.50
(C) \$3.75
(D) \$3.55

7. Which of the following rules describes the pattern in the table?

Input	h	3	4	5
Output	j	12	13	14

- (A) $j = h + 9$
(B) $j = 9h$
(C) $h = j + 9$
(D) $h = 9j$
9. The equation $d = m + 16$ represents the total distance traveled after driving m number of miles. If Mrs. Kiki drives 35 miles, what is the total distance traveled?
- (A) 41 miles
(B) 21 miles
(C) 51 miles
(D) 19 miles

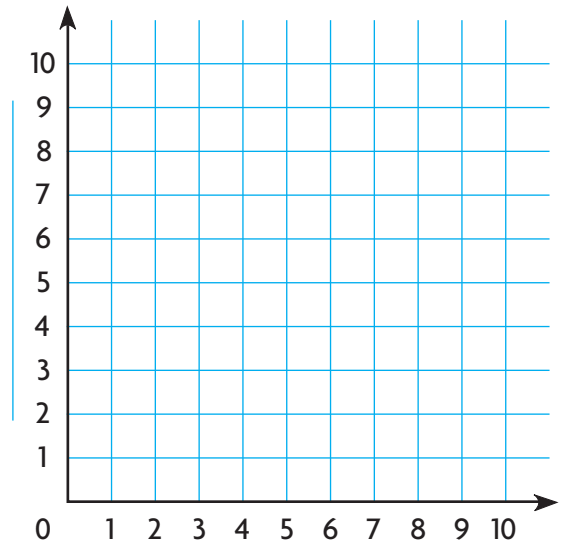
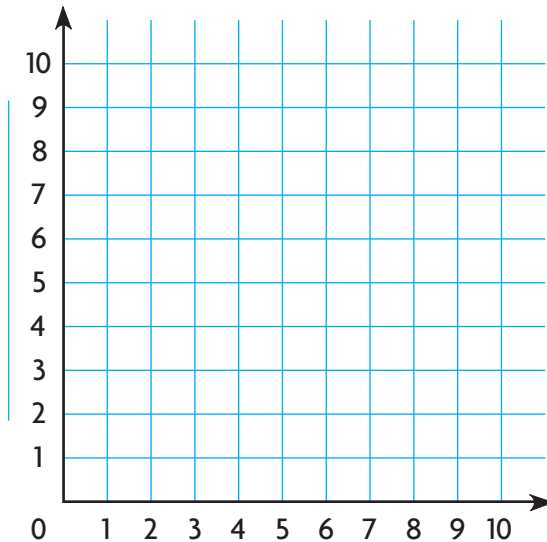
Graph a Number Pattern

Go Online

Interactive Examples

Use the rule to graph a pattern.

1. The cost for printing pages at a print shop is a \$5 processing fee and \$1 for each page. The rule is $c = 5 + p$, where p is the number of pages and c is the total cost.
2. Mario uses craft sticks to form triangles. The rule is $c = 3t$, where c represents the number of craft sticks and t represents the number of triangles.

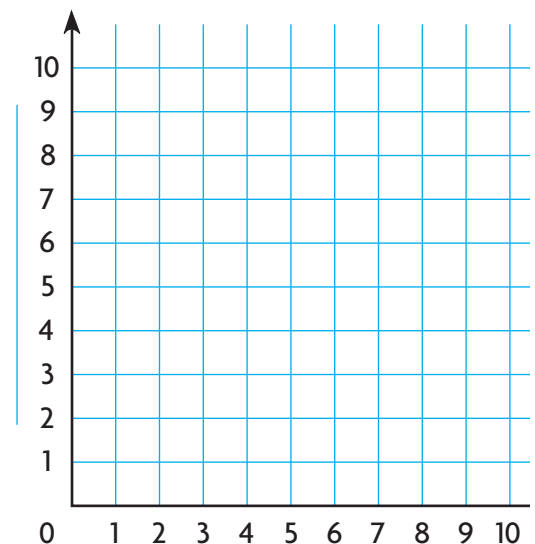


Problem Solving

Use the graph for 3–4.

3. A department store offers free samples of a 2-ounce container of lotion with every fragrance purchase of any size. Write a rule to describe the number of ounces of product received for each purchase. Plot 3 points on the graph to show the pattern. Use t for the total number of ounces of product received and f for the ounces of fragrance sold.

4. Cristina buys 6 ounces of fragrance on Monday and returns to buy another 4 ounces of fragrance on Friday. How many ounces of fragrance will she have in all?



Lesson Check

Fill in the bubble completely to show your answer.

5. Blanca uses the rule $b = 4a$ to complete a table and make a graph. Which number pair will be on the graph?

<i>a</i>	2	3	4	5
<i>b</i>	8			

- Ⓐ (3, 12)
Ⓑ (3, 7)
Ⓒ (4, 8)
Ⓓ (12, 3)

6. The online music store charges a \$6 fee for becoming a member and \$1 to download each song. Noriko uses the rule $c = 6 + s$ to calculate her cost. Which number pair shows the cost of 5 songs?

- Ⓐ (5, 6)
Ⓑ (5, 11)
Ⓒ (5, 5)
Ⓓ (1, 5)

Understand Ordered Pairs

Use Coordinate Plane A to write an ordered pair for the given point.

1. A (2, 3)

2. B

3. C

4. D

5. E

6. F

Plot and label the points on Coordinate Plane B.

7. N(7, 3)

8. R(0, 4)

9. O(8, 7)

10. M(2, 1)

11. P(5, 6)

12. Q(1, 5)

Problem Solving



Use the map for 13–14.

13. Which building is located at (5, 6)?

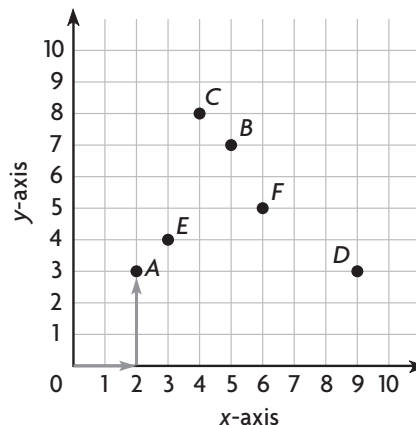
14. What is the distance between Kip's Pizza and the bank?

15. **WRITE** *Math* What is a situation in which you might locate points on a coordinate plane?

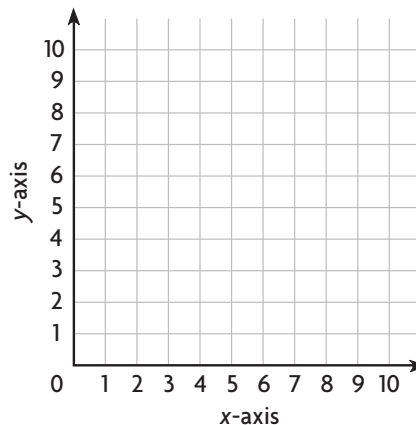
Go Online

Interactive Examples

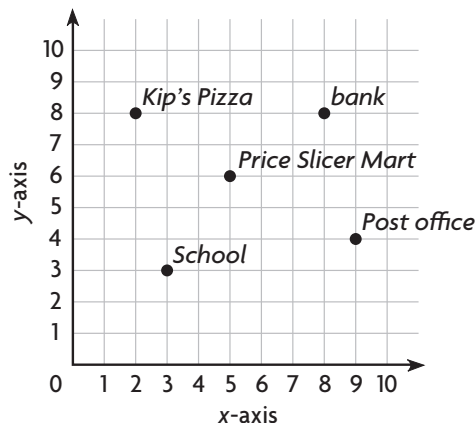
Coordinate Plane A



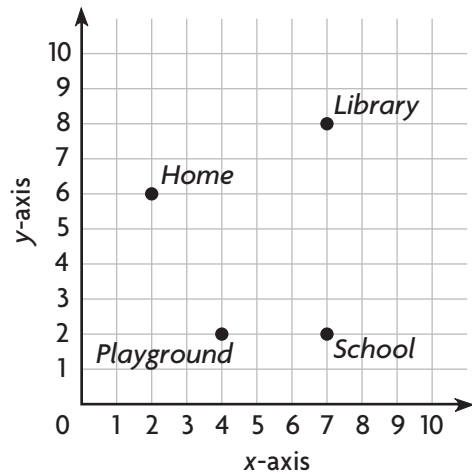
Coordinate Plane B



Port Charlotte



Lesson Check



16. What ordered pair describes the location of the playground?

17. What is the distance between the school and the library?
