

Name _____

Line Plots

COMMON CORE STANDARD CC.5.MD.2

Represent and interpret data.

Use the data to complete the line plot. Then answer the questions.

A clerk in a health food store makes bags of trail mix. The amount of trail mix in each bag is listed below.

$\frac{1}{4}$ lb, $\frac{1}{4}$ lb, $\frac{3}{4}$ lb, $\frac{1}{2}$ lb, $\frac{1}{4}$ lb, $\frac{3}{4}$ lb,
 $\frac{3}{4}$ lb, $\frac{3}{4}$ lb, $\frac{1}{2}$ lb, $\frac{1}{4}$ lb, $\frac{1}{2}$ lb, $\frac{1}{2}$ lb

1. What is the combined weight of the $\frac{1}{4}$ -lb bags? 1 lb

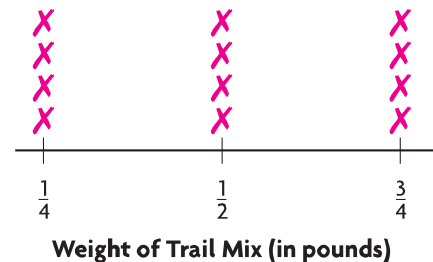
Think: There are four $\frac{1}{4}$ -pound bags.

2. What is the combined weight of the $\frac{1}{2}$ -lb bags? 2 lb

3. What is the combined weight of the $\frac{3}{4}$ -lb bags? 3 lb

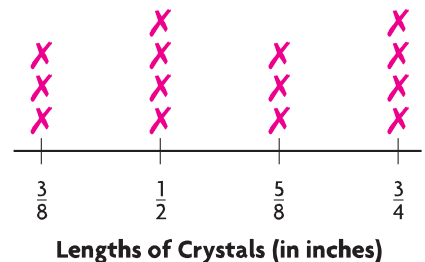
4. What is the total weight of the trail mix used in all the bags? 6 lb

5. What is the average amount of trail mix in each bag? $\frac{1}{2}$ lb



Julie uses crystals to make a bracelet. The lengths of the crystals are shown below.

$\frac{1}{2}$ in., $\frac{5}{8}$ in., $\frac{3}{4}$ in., $\frac{1}{2}$ in., $\frac{3}{8}$ in., $\frac{1}{2}$ in., $\frac{3}{4}$ in.,
 $\frac{3}{8}$ in., $\frac{3}{4}$ in., $\frac{5}{8}$ in., $\frac{1}{2}$ in., $\frac{3}{8}$ in., $\frac{5}{8}$ in., $\frac{3}{4}$ in.



6. What is the combined length of the $\frac{1}{2}$ -in. crystals? 2 in.

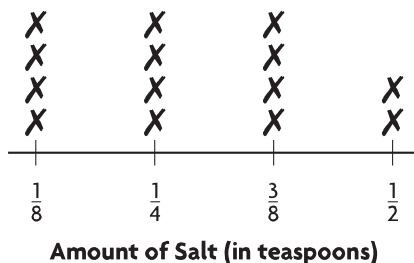
7. What is the combined length of the $\frac{5}{8}$ -in. crystals? $1\frac{7}{8}$ in.

8. What is the total length of all the crystals in the bracelet? 8 in.

9. What is the average length of each crystal in the bracelet? $\frac{4}{7}$ in.

Lesson Check (CC.5.MD.2)

A baker uses different amounts of salt when she bakes loaves of bread, depending on which recipe she is following. The amount of salt called for in each recipe is shown on the line plot.



1. Based on the line plot, how many recipes call for more than $\frac{1}{4}$ tsp of salt?

- (A) 4 (C) 8
 (B) 6 (D) 12

2. What is the average amount of salt called for in each recipe?

- (A) $\frac{1}{8}$ tsp (C) $\frac{2}{7}$ tsp
 (B) $\frac{1}{4}$ tsp (D) $\frac{1}{2}$ tsp

Spiral Review (CC.5.NBT.4, CC.5.NF.1, CC.5.NF.4a, CC.5.NF.7c)

3. Ramona had $8\frac{3}{8}$ in. of ribbon. She used $2\frac{1}{2}$ in. for an art project. How many inches of ribbon does she have left? Find the difference in simplest form. (Lesson 6.7)

- (A) $5\frac{1}{8}$ in.
 (B) $5\frac{7}{8}$ in.
 (C) $6\frac{1}{8}$ in.
 (D) $6\frac{1}{6}$ in.

4. Ben bought $\frac{1}{2}$ pound of cheese for 3 sandwiches. If he puts the same amount of cheese on each sandwich, how much cheese will each sandwich have? (Lesson 8.4)

- (A) $\frac{1}{6}$ lb
 (B) $\frac{2}{3}$ lb
 (C) $1\frac{1}{2}$ lb
 (D) 6 lb

5. What is 92.583 rounded to the nearest tenth? (Lesson 3.4)

- (A) 90
 (B) 92.5
 (C) 92.58
 (D) 92.6

6. In Yoshi's garden, $\frac{3}{4}$ of the flowers are tulips. Of the tulips, $\frac{2}{3}$ are yellow. What fraction of the flowers in Yoshi's garden are yellow tulips? (Lesson 7.6)

- (A) $\frac{1}{12}$
 (B) $\frac{5}{12}$
 (C) $\frac{1}{2}$
 (D) $\frac{5}{7}$

Name _____

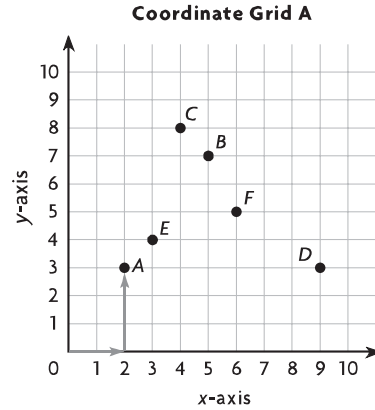
Ordered Pairs

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

- | | | | |
|------|--------|------|--------|
| 1. A | (2, 3) | 2. B | (5, 7) |
| 3. C | (4, 8) | 4. D | (9, 3) |
| 5. E | (3, 4) | 6. F | (6, 5) |

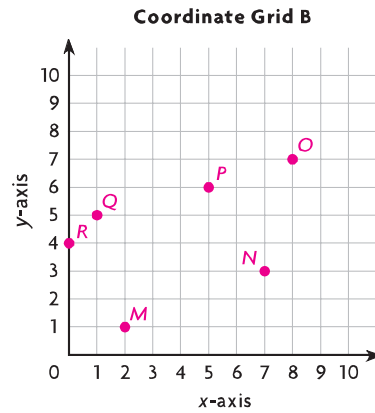
COMMON CORE STANDARD CC.5.G.1

Graph points on the coordinate plane to solve real-world and mathematical problems.



Plot and label the points on Coordinate Grid 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 **REAL WORLD**

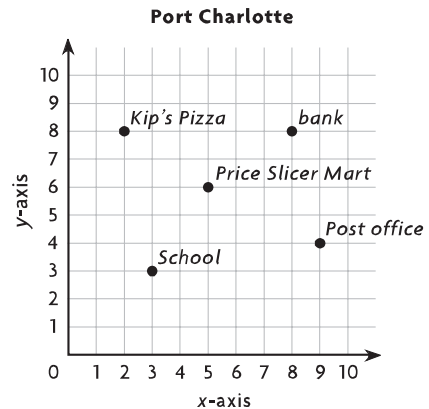
Use the map for 13–14.

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

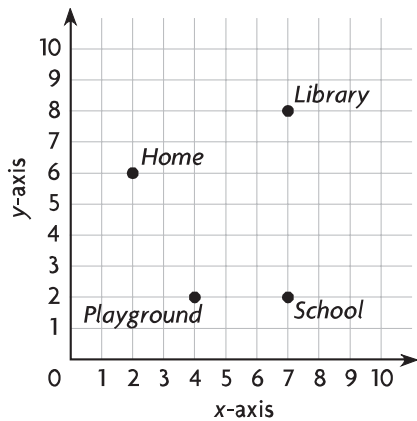
Price Slicer Mart

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

6 units



Lesson Check (CC.5.G.1)



- Which ordered pair describes the location of the playground?
 - (A) (2, 4)
 - (B) (4, 2)
 - (C) (3, 1)
 - (D) (1, 3)
- What is the distance between the school and the library?
 - (A) 5 units
 - (B) 6 units
 - (C) 7 units
 - (D) 9 units

Spiral Review (CC.5.NBT.1, CC.5.NBT.5, CC.5.NBT.6)

- What is the value of the underlined digit?
(Lesson 1.2)

45,769,331

- (A) 60
- (B) 6,000
- (C) 60,000
- (D) 70,000

- Andrew charges \$18 for each lawn he mows. Suppose he mows 17 lawns per month. How much money will Andrew make per month?
(Lesson 1.7)

- (A) \$305
- (B) \$306
- (C) \$350
- (D) \$360

- Harlow can bicycle at a rate of 18 miles per hour. How many hours would it take him to bicycle a stretch of road that is 450 miles long?
(Lesson 2.6)

- (A) 20 hours
- (B) 25 hours
- (C) 30 hours
- (D) 35 hours

- Molly uses 192 beads to make a bracelet and a necklace. It takes 5 times as many beads to make a necklace than it does to make a bracelet. How many beads are used to make the necklace?
(Lesson 2.9)

- (A) 32
- (B) 37
- (C) 160
- (D) 165

Name _____

Graph Data

COMMON CORE STANDARD CC.5.G.2

Graph points on the coordinate plane to solve real-world and mathematical problems.

Graph the data on the coordinate grid.

1.

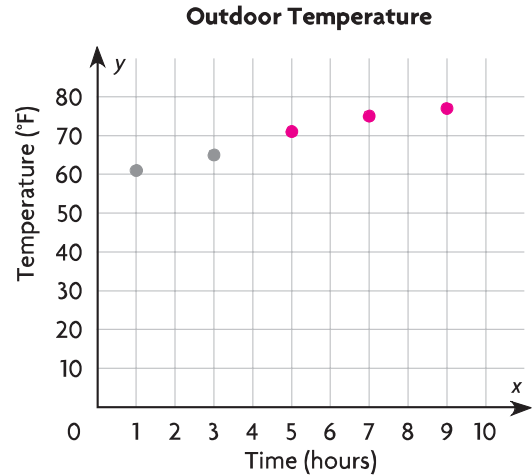
Outdoor Temperature					
Hour	1	3	5	7	9
Temperature (°F)	61	65	71	75	77

a. Write the ordered pairs for each point.

**(1, 61), (3, 65), (5, 71),
(7, 75), (9, 77)**

b. How would the ordered pairs be different if the outdoor temperature were recorded every hour for 4 consecutive hours?

Possible answer: There would be 4 ordered pairs; the ordered pairs would record the outdoor temperature at Hours 1, 2, 3, and 4.



Problem Solving



Possible graph is shown.

2.

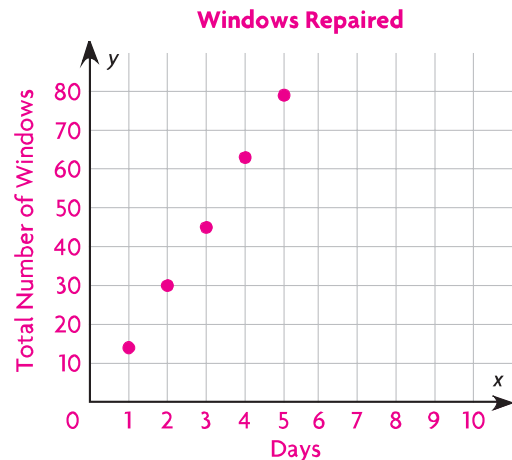
Windows Repaired					
Day	1	2	3	4	5
Total Number Repaired	14	30	45	63	79

a. Write the ordered pairs for each point.

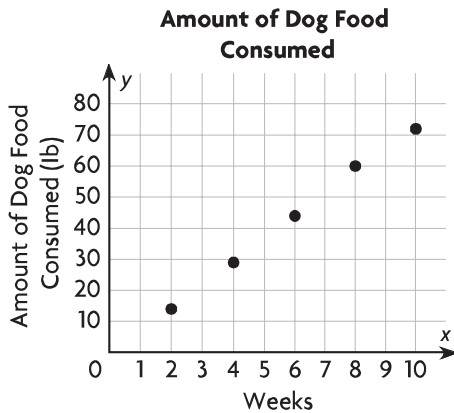
**(1, 14), (2, 30), (3, 45),
(4, 63), (5, 79)**

b. What does the ordered pair (2, 30) tell you about the number of windows repaired?

Possible answer: After 2 days, a total of 30 windows had been repaired.



Lesson Check (CC.5.G.2)



- About how many weeks did it take for the dog to consume 45 pounds of food?
 - (A) 4 weeks
 - (B) 5 weeks
 - (C) 6 weeks
 - (D) 7 weeks
- By the end of Week 8, how much food had the dog consumed?
 - (A) 29 pounds
 - (B) 44 pounds
 - (C) 60 pounds
 - (D) 72 pounds

Spiral Review (CC.5.OA.2, CC.5.NBT.6, CC.5.NF.2)

- A restaurant chain ordered 3,945 pounds of rice in 20-pound bags. About how many 20-pound bags of rice did the chain order? (Lesson 2.5)
 - (A) 4,000
 - (B) 2,000
 - (C) 200
 - (D) 20
- Timothy needs $\frac{1}{2}$ cup of bread crumbs for a casserole and $\frac{1}{3}$ cup of bread crumbs for the topping. How many cups of bread crumbs does Timothy need? (Lesson 6.1)
 - (A) $\frac{1}{5}$ cup
 - (B) $\frac{1}{3}$ cup
 - (C) $\frac{2}{5}$ cup
 - (D) $\frac{5}{6}$ cup
- The population of Linton is 12 times as great as the population of Ellmore. The combined population of both towns is 9,646 people. What is the population of Linton? (Lesson 2.9)
 - (A) 742
 - (B) 804
 - (C) 8,904
 - (D) 9,634
- Jessie bought 3 T-shirts for \$6 each and 4 T-shirts for \$5 each. Which expression can you use to describe what Jessie bought? (Lesson 1.10)
 - (A) $3 + 6 + 4 + 5$
 - (B) $(3 + 6) \times (4 + 5)$
 - (C) $(3 \times 6) + (4 \times 5)$
 - (D) $(3 \times 6) \times (4 \times 5)$

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Line Graphs

COMMON CORE STANDARDS CC.5.G.2

Graph points on the coordinate plane to solve real-world and mathematical problems.

Use the table for 1–5.

Hourly Temperature							
Time	10 A.M.	11 A.M.	12 noon	1 P.M.	2 P.M.	3 P.M.	4 P.M.
Temperature (°F)	8	11	16	27	31	38	41

1. Write the related number pairs for the hourly temperature as ordered pairs.

(10, 8); (11, 11); (12, 16); (1, 27); (2, 31); (3, 38); (4, 41)

2. What scale would be appropriate to graph the data?

Possible scale: 0 to 50

3. What interval would be appropriate to graph the data?

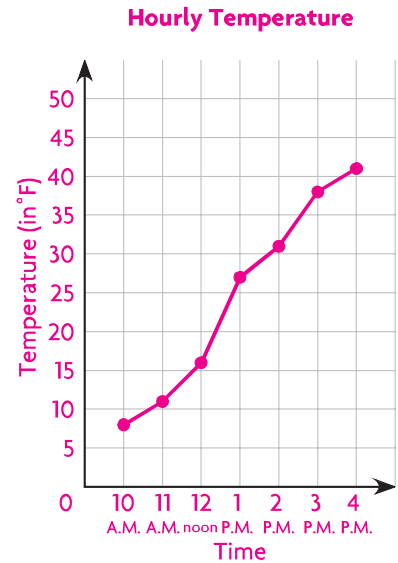
Possible interval: 5

4. Make a line graph of the data.

Possible graph is shown.

5. Use the graph to find the difference in temperature between 11 A.M. and 1 P.M.

16° F



Problem Solving



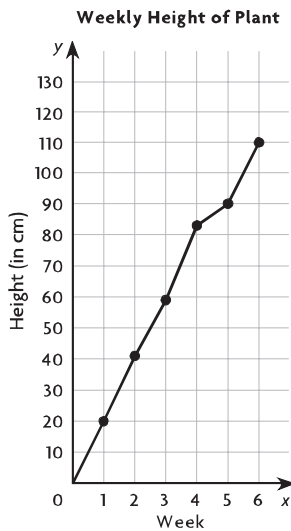
6. Between which two hours did the least change in temperature occur?

Between 10 A.M. and 11 A.M. and between 3 P.M. and 4 P.M.

7. What was the change in temperature between 12 noon and 4 P.M.?

25° F

Lesson Check (CC.5.G.2)



- How many centimeters did the plant grow in the first three weeks?
 - (A) 20 cm
 - (B) 41 cm
 - (C) 59 cm
 - (D) 83 cm
- Between which two weeks did the plant grow the least?
 - (A) Weeks 2 and 3
 - (B) Weeks 3 and 4
 - (C) Weeks 4 and 5
 - (D) Weeks 5 and 6

Spiral Review (CC.5.OA.2, CC.5.NBT.6, CC.5.NF.6, CC.5.NF.7c)

- Which shows the correct use of the Distributive Property to find the product of 7×63 ? (Lesson 1.10)
 - (A) $(7 \times 60) \times (7 \times 3)$
 - (B) $(7 + 60) \times (7 + 3)$
 - (C) $(7 \times 60) + (7 \times 3)$
 - (D) $7 + (60 \times 3)$
- A student athlete runs $3\frac{1}{3}$ miles in 30 minutes. A professional runner can run $1\frac{1}{4}$ times as far in 30 minutes. How far can the professional runner run in 30 minutes? (Lesson 7.9)
 - (A) $3\frac{1}{12}$ miles
 - (B) $4\frac{1}{6}$ miles
 - (C) $4\frac{2}{7}$ miles
 - (D) $4\frac{7}{12}$ miles
- Ali multiplies 3 numbers using the expressions $a \times (b \times c)$ and $(a \times b) \times c$. Which property of multiplication does Ali use? (Lesson 1.3)
 - (A) Associative Property of Multiplication
 - (B) Commutative Property of Multiplication
 - (C) Distributive Property of Multiplication
 - (D) Identity Property of Multiplication
- A recipe for salad dressing calls for $\frac{1}{4}$ cup of vinegar. You have 4 cups of vinegar. How many batches of salad dressing could you make with the vinegar? (Lesson 8.4)
 - (A) 1
 - (B) 4
 - (C) 8
 - (D) 16

Name _____

Numerical Patterns

COMMON CORE STANDARD CC.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 4 to find total cost.

Boxes	1	2	3	4	6
Number of Pounds	3	6	9	12	18
Total Cost (\$)	12	24	36	48	72

3. Multiply the number of hours by 65 to find the number of miles.

Cars	1	2	3	4
Number of Hours	2	4	6	8
Number of Miles	130	260	390	520

4. Multiply the number of hours by 12 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	672

Problem Solving



5. A map distance of 5 inches 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.

280 miles; Possible rule: Multiply the map distance by 40.

6. To make one 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.

24 yards; Possible rule: Divide the number of yards of costume material by 2.

Lesson Check (CC.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	?

- What rule could you write that relates Sequence 2 to Sequence 1?
 - (A) Add 8.
 - (B) Multiply by 3.
 - (C) Multiply by 4.
 - (D) Add 48.
- What is the unknown number in Sequence 2?
 - (A) 48
 - (B) 72
 - (C) 60
 - (D) 96

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

- What is the value of the following expression?
(Lesson 1.12)

$$40 - (3 + 2) \times 6$$
 - (A) 10
 - (B) 49
 - (C) 210
 - (D) 234
- Which is the best estimate for the sum of $\frac{3}{8}$ and $\frac{1}{12}$? (Lesson 6.3)
 - (A) 0
 - (B) $\frac{1}{2}$
 - (C) 1
 - (D) 4
- What is the value of the digit 9 in the number 597,184? (Lesson 1.2)
 - (A) 900
 - (B) 9,000
 - (C) 90,000
 - (D) 900,000
- Terry uses 3 cups of pecans to decorate the tops of 12 pecan pies. She puts an equal amount of pecans on each pie. How many cups of pecans does she put on each pie? (Lesson 8.3)
 - (A) 9 cups
 - (B) 4 cups
 - (C) $\frac{1}{3}$ cup
 - (D) $\frac{1}{4}$ cup

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Problem Solving • Find a Rule

COMMON CORE STANDARD CC.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	15	30	45

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	105	140	175	420

Possible rule:

Multiply the number

of months by 35.

The Gilman family will have spent \$420.

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	60

Possible rule:

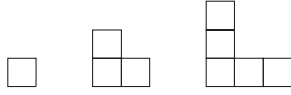
Multiply the number

of stacks by 6.

The total height of 10 stacks is 60 in.

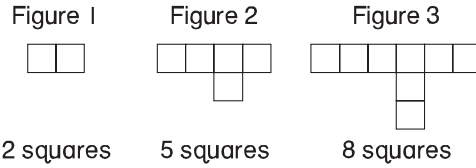
Lesson Check (CC.5.OA.3)

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



- (A) 14
 (B) 15
 (C) 16
 (D) 17

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



- 2 squares 5 squares 8 squares
- (A) $6 + 2$ $8 + 3$
 (B) $6 + 3$ (D) $8 + 4$

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

3. A bakery displays their cookies equally on 7 trays. If there are 567 cookies, how many cookies are on each tray? (Lesson 2.2)

- (A) 487
 (B) 486
 (C) 81
 (D) 80

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? (Lesson 6.7)

- (A) $\frac{11}{12}$
 (B) $1\frac{11}{12}$
 (C) $2\frac{1}{12}$
 (D) $3\frac{1}{12}$

5. What is the next number in this pattern? (Lesson 3.10)

0.54, 0.6, 0.66, 0.72, ■, ...

- (A) 0.76
 (B) 0.78
 (C) 0.8
 (D) 0.82

6. How do you write 100 as a power of 10? (Lesson 1.4)

- (A) 10^0
 (B) 10^1
 (C) 10^2
 (D) 10^3

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Graph and Analyze Relationships

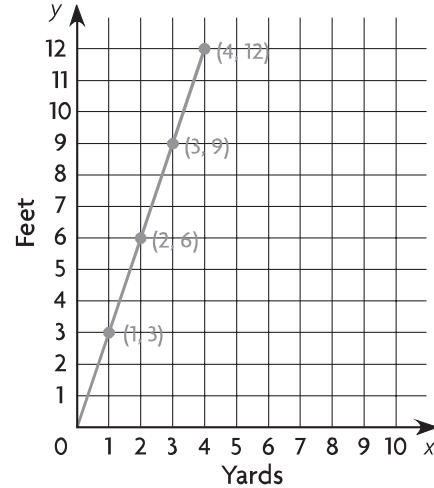
COMMON CORE STANDARD CC.5.OA.3

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.

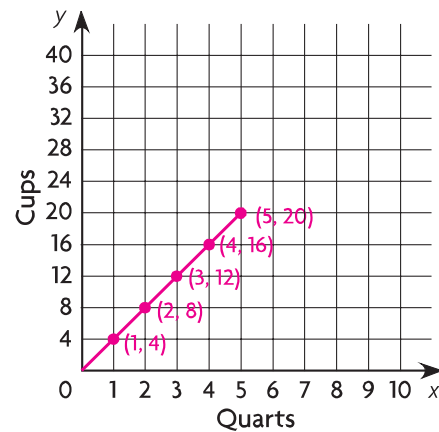
1. Multiply the number of yards by 3 to find the number of feet.

Yards	1	2	3	4
Feet	3	6	9	12



2. Multiply the number of quarts by 4 to find the number of cups that measure the same amount.

Quarts	1	2	3	4	5
Cups	4	8	12	16	20



Problem Solving **REAL WORLD**

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

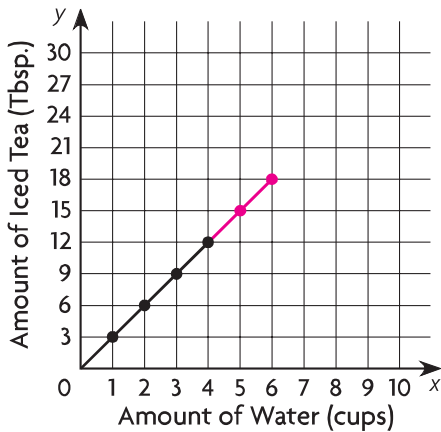
Possible answer: Extend the line on the graph. Locate 9 on the x-axis and draw a vertical line up to the line plotted on the graph. From that point, draw a horizontal line to the y-axis. The number on the y-axis is the number of cups that are equal to 9 quarts.

4. How many cups are equal to 9 quarts? 36

Lesson Check (CC.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.



- What rule relates the amount of iced tea mix to the amount of water?
 - (A) Multiply the amount of mix by 6.
 - (B) Multiply the amount of mix by 3.
 - (C) Multiply the amount of mix by $\frac{1}{3}$.
 - (D) Multiply the amount of mix by $\frac{1}{6}$.
- Suppose Paola uses 18 tablespoons of iced tea mix. How many cups of water does she need to use?
 - (A) 3 cups
 - (B) 6 cups
 - (C) 9 cups
 - (D) 54 cups

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

- A biologist counted 10,000 migrating monarch butterflies. How do you express 10,000 as a power of 10? (Lesson 1.4)
 - (A) 10^2
 - (B) 10^3
 - (C) 10^4
 - (D) 10^5
- What is $54.38 + 29.7$? (Lesson 3.8)
 - (A) 57.35
 - (B) 83.45
 - (C) 83.08
 - (D) 84.08
- For which expression will the quotient be greater than 100? (Lesson 2.6)
 - (A) $5,394 \div 57$
 - (B) $6,710 \div 69$
 - (C) $7,198 \div 74$
 - (D) $8,426 \div 82$
- On a certain day, \$1 is worth 30.23 Russian rubles. Omar has \$75. How many rubles will he get in exchange? (Lesson 4.5)
 - (A) 2,267.25
 - (B) 2,256.25
 - (C) 362.76
 - (D) 2.48

Name _____

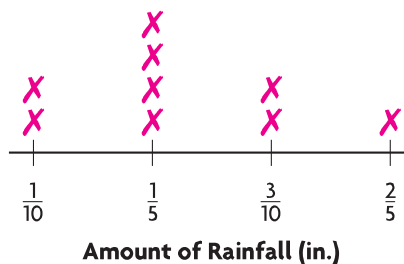
Chapter 9 Extra Practice

Lesson 9.1

Use the data to complete the line plot. Then answer the questions.

1. Annabelle measured and recorded the amount of rainfall for 9 days in a row. Her results are shown below.

$\frac{3}{10}$ in., $\frac{1}{5}$ in., $\frac{1}{10}$ in., $\frac{1}{10}$ in., $\frac{3}{10}$ in.,
 $\frac{2}{5}$ in., $\frac{1}{5}$ in., $\frac{1}{5}$ in., $\frac{1}{5}$ in.



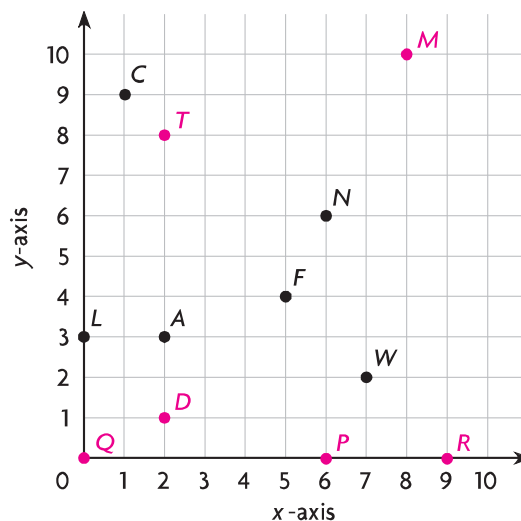
2. What was the average amount of rainfall per day for the 9-day period?

$\frac{2}{9}$ inch

Lesson 9.2

Use the coordinate grid to write an ordered pair for the given point.

- | | | | |
|---------------|--------|---------------|--------|
| 1. A
_____ | (2, 3) | 2. F
_____ | (5, 4) |
| 3. L
_____ | (0, 3) | 4. C
_____ | (1, 9) |
| 5. N
_____ | (6, 6) | 6. W
_____ | (7, 2) |



Plot and label the points on the coordinate grid.

- | | | |
|--------------|--------------|--------------|
| 7. P (6, 0) | 8. T (2, 8) | 9. M (8, 10) |
| 10. R (9, 0) | 11. Q (0, 0) | 12. D (2, 1) |

Lessons 9.3 - 9.4

Check students' line graphs.

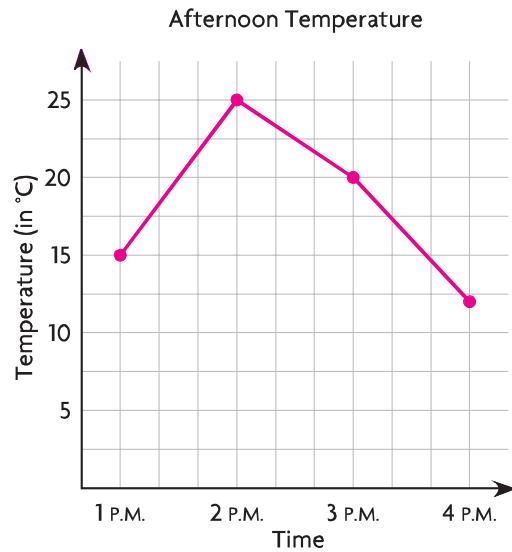
Use the table for 1–2.

1. Make a line graph of the data.

Afternoon Temperature				
Time	1 P.M.	2 P.M.	3 P.M.	4 P.M.
Temperature (in °C)	15	25	20	12

2. Use the graph to find the difference in temperature between 2 P.M. and 3 P.M.

5°C



Lessons 9.5 - 9.7

Check students' graphs.

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

1. Multiply the gallons of gas by 19 to find the miles traveled per gallon.
2. Multiply the minutes by 60 to find the total number of seconds.

Gallons of Gas	1	2	3	4	5
Number of Miles Traveled per Gallon	19	38	57	76	95

Minutes	1	2	3	5
Seconds	60	120	180	300

