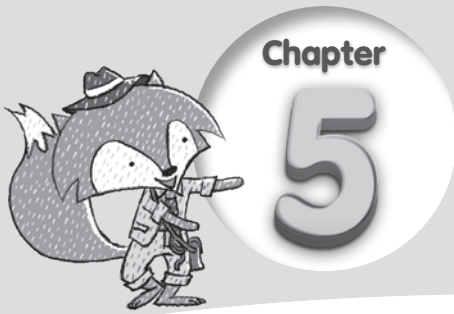


6th Grade Course I Summer Work

Show all of your work for the problems in this packet, even the multiple choice ones. If you do not have written work to show, explain your thinking.



Reteach

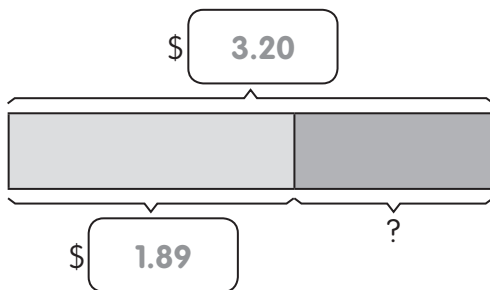
Four Operations of Decimals

Activity 9 Real-World Problems: Decimals

Solve. Show your work. Use the bar model to help you.

Example

Lily has \$3.20. She spends \$1.89 on a ruler. How much money does she have left?



$$\text{\$ } \underline{3.20} \quad \bigcirc - \quad \text{\$ } \underline{1.89} = \text{\$ } \underline{1.31}$$

Lily has \$ 1.31 left.

Estimate:

\$3.20 is about \$ 3 .

\$1.89 is about \$ 2 .

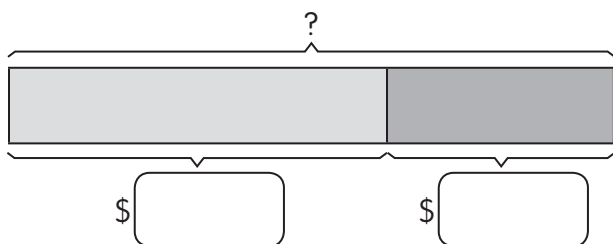
\$ 3 - \$ 2 = \$ 1

\$ 1.51 is close to \$ 1 .

The answer is reasonable .



- 1 Gabriel buys some pens for \$3.77 and a pencil case for \$5.48. How much money does he pay altogether?



Estimate:

\$5.48 is about \$_____.

\$3.77 is about \$_____.

\$_____ + \$_____ = \$_____

\$_____ is close to \$_____.

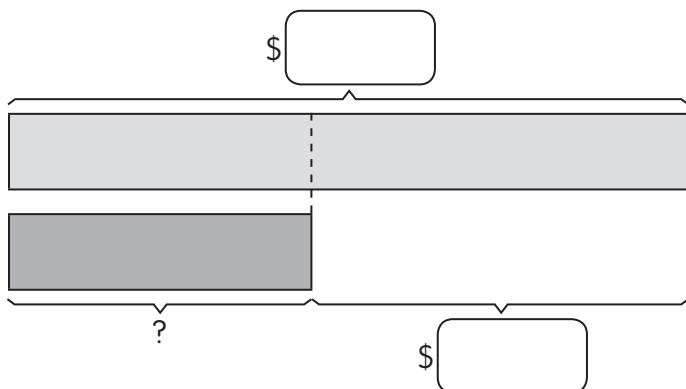
The answer is _____.

\$_____ ○ \$_____ = \$_____

He pays \$_____ altogether.



- 2 A notebook costs \$2.87. A pencil costs \$1.58 cheaper than the notebook. How much does the pencil cost?



Estimate:

\$2.87 is about \$_____.

\$1.58 is about \$_____.

\$_____ - \$_____

= \$_____

\$_____ is close to

\$_____.

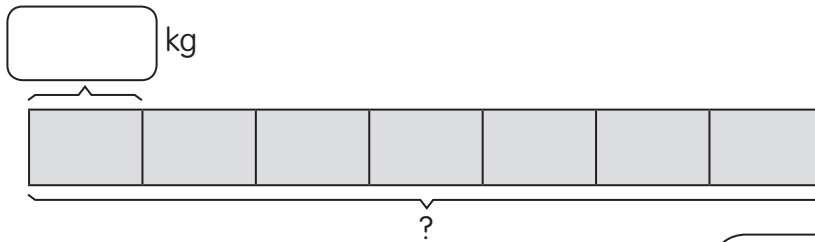
The answer is _____.

\$_____ ○ \$_____ = \$_____

The pencil costs \$_____.



- 3 Ms. Alvarez packs 10.375 kilograms of rice into a bag. She donates 7 of these bags to a charity organization. How many kilograms of rice does she donate?



Estimate:

10.375 is about _____.

_____ \times _____ = _____

_____ is close to _____.

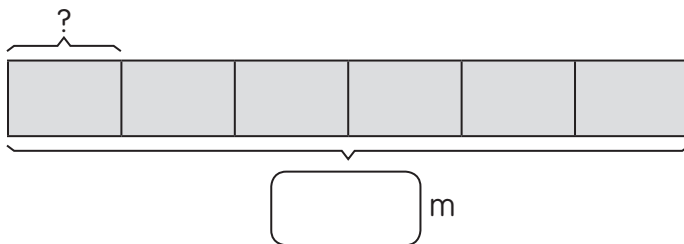
The answer is _____.

_____ \bigcirc _____ = _____

She donates _____ kilograms of rice.



- 4 Pedro has a 15.54-meter piece of rope. He cuts the rope into 6 equal strips. Find the length of each strip.



Estimate:

15.54 is about _____.

_____ \div _____ = _____

_____ is close to _____.

The answer is _____.

_____ \bigcirc _____ = _____

The length of each strip is _____ meters.



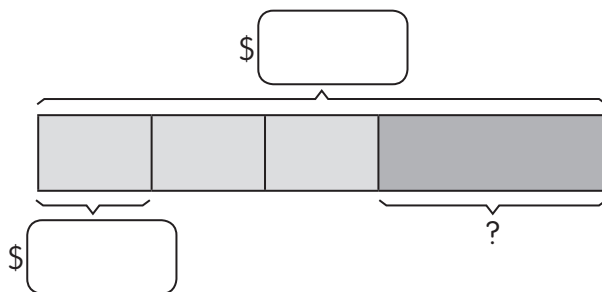
Solve. Show your work. Draw bar models to help you.

- 5 Bianca uses a pail to collect 2.8 liters of rainwater. She uses 0.97 liter of rainwater to water her plants. How many liters of rainwater are left in the pail?
- 6 Vijay adds 0.59 liter of water to 0.645 liter of lemon syrup to make some lemonade. How many liters of lemonade does he make?

- 7 Mr. Myers uses 2.75 meters of fabric to make a dress. How many yards of fabric does he need to make 9 identical dresses?

Solve. Show your work. Use the bar model to help you.

- 8 Mr. Diaz has \$9.20. He buys 3 packets of buns at \$2.50 each. How much money does he have left?



Estimate:

\$9.20 is about \$_____.

\$7.50 is about \$_____.

\$_____ - \$_____ = \$_____

\$_____ is close to \$_____.

The answer is _____.

\$_____ ○ \$_____ = \$_____

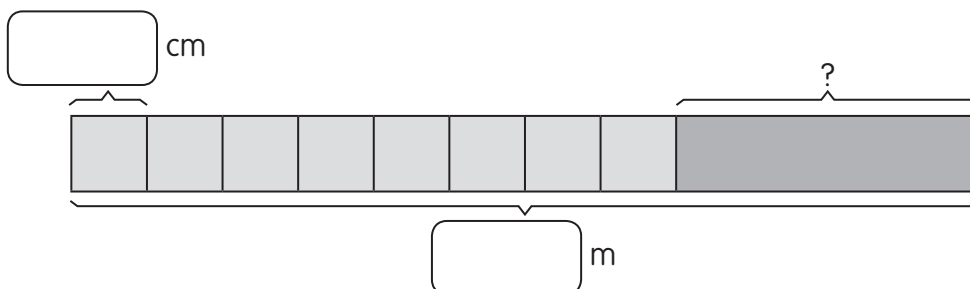
The buns cost \$_____ altogether.

\$_____ ○ \$_____ = \$_____

He has \$_____ left.



- 9 Gael uses 86.45 centimeters of string to tie a box. He needs to tie 8 identical boxes. He cuts pieces of strings from a 10-meter roll. Find the length of the roll of string left.



Estimate:

6.916 is about _____.

_____ - _____ = _____

_____ is close to _____.

The answer is _____.



_____ \bigcirc _____ = _____

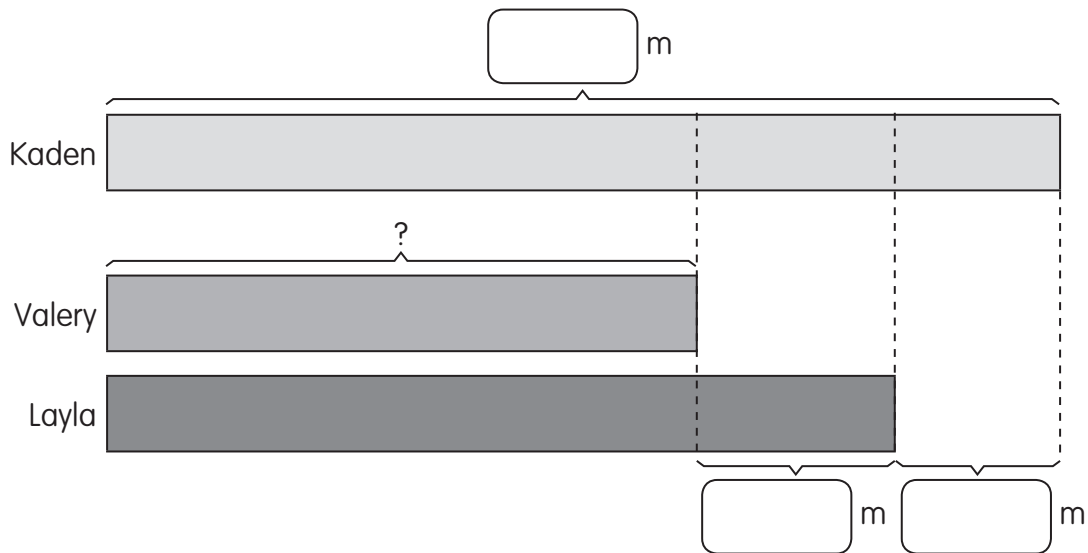
_____ cm = _____ m

He uses _____ meters of string to tie the boxes.

_____ \bigcirc _____ = _____

The length of the roll of string left is _____ meters.

- 10 Kaden is 1.47 meters tall. Layla is 0.12 meter shorter than Kaden. Layla is 0.13 meter taller than Valery. How tall is Valery?



Estimate:

1.35 is about _____.

0.13 is about _____.

_____ - _____ = _____

_____ is close to _____.

The answer is _____



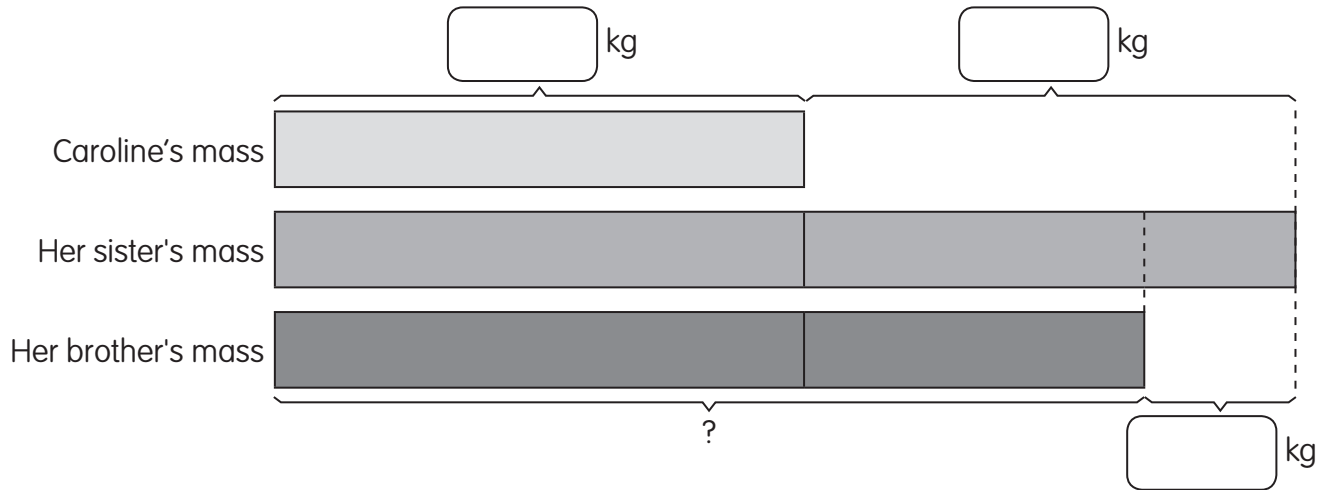
_____ ○ _____ = _____

Layla is _____ meters tall.

_____ ○ _____ = _____

Valery is _____ meters tall.

- 11 Caroline's mass is 35.3 kilograms. Her sister's mass is 28.4 kilograms heavier than her. Her brother's mass is 7.8 kilograms lighter than her sister's. Find her brother's mass.



Estimate:

63.7 is about _____.

7.8 is about _____.

_____ - _____ = _____

_____ is close to _____.

The answer is _____.



_____ \bigcirc _____ = _____

Her sister's mass is _____ kilograms.

_____ \bigcirc _____ = _____

Her brother's mass is _____ kilograms.

Solve. Show your work. Draw bar models to help you.

- 12 Chika jogs for 3.25 kilometers on Friday. She jogs 1.3 kilometers more on Saturday. She jogs 0.85 kilometer less on Sunday than on Saturday. How far does Chika jog on Sunday?
- 13 Ms. Cox uses 1.37 meters of cloth to make a blouse. She needs 1.6 meters more cloth to make a dress. If she makes 20 identical dresses, how many meters of cloth does she need?

- 14 The capacity of a pail is 18.93 liters. Rafael fills 7 of these pails with water. He then uses 68.9 liters of the water to wash his car. How many liters of water does he have left?

- 15 Mr. Wilson saved \$100. He bought a book for \$17.65. He then distributes the remaining amount of money equally among his 5 children. Find the amount of money each child receives.



Chapter

3

Reteach

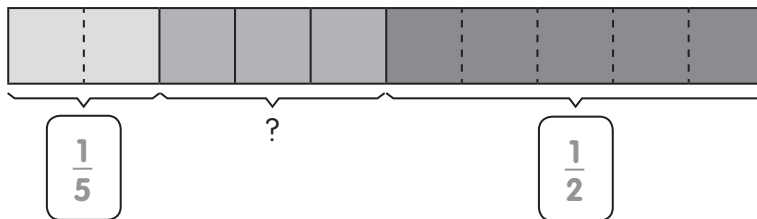
Multiplying and Dividing Fractions and Mixed Numbers

Activity 8 Real-World Problems: Multiplying and Dividing with Fractions

Solve. Show your work. Use the model to help you.

Example

Eduardo bakes 150 muffins. $\frac{1}{5}$ of the muffins are banana flavor and $\frac{1}{2}$ of the muffins are blueberry flavor. The rest are strawberry flavor. How many muffins are strawberry flavor?



The model shows that:

$$10 \text{ units} = 150$$

$$1 \text{ unit} = 150 \div 10$$

$$= 15$$

$$3 \text{ units} = 15 \times 3$$

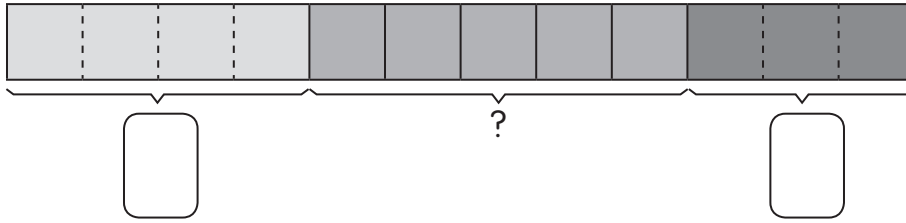
$$= 45$$

45 muffins are strawberry flavor.

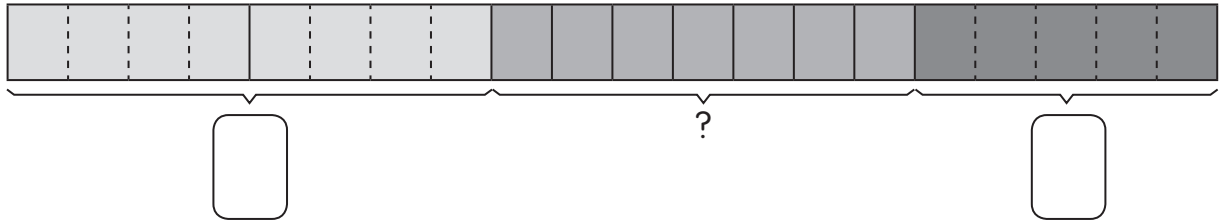
You can use the four-step problem-solving model to help you.



- 1 There are 216 pieces of fruit in a box. $\frac{1}{3}$ of the pieces are apples and $\frac{1}{4}$ of the pieces are pears. The rest are oranges. How many oranges are there?



- 2 There were 60 buns in a bakery. $\frac{2}{5}$ of the buns were cheese buns and $\frac{1}{4}$ of them were ham buns. The rest were butter buns. How many butter buns were there?



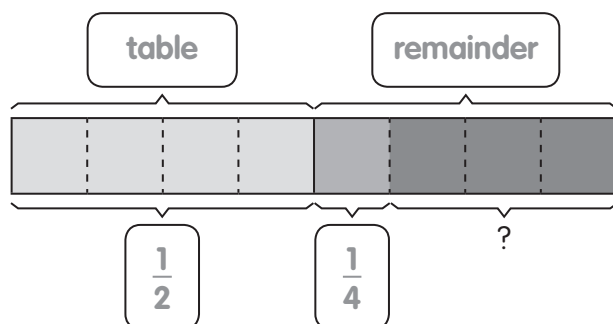
Solve. Show your work. Draw a model to help you.

- 3 Faith had a box of stickers. She gave $\frac{3}{8}$ of the stickers to her brother, $\frac{1}{4}$ of the stickers to her sister, and kept the remaining stickers for herself. Her sister received 30 stickers. How many stickers did she keep for herself?

Solve. Show your work. Use the model to help you.

Example

Nevaeh saved \$300. She used $\frac{1}{2}$ of the money to buy a table and $\frac{1}{4}$ of the remainder to buy a chair. How much money did she have left?



The model shows that:

$$8 \text{ units} = \$300$$

$$1 \text{ unit} = \$300 \div 8 \\ = \$37.50$$

$$3 \text{ units} = \$37.50 \times 3 \\ = \$112.50$$

She had \$112.50 left.

Remainder = 1 part

To show $\frac{1}{4}$ of the remainder was spent on the chair, further divide the remainder into 4 parts.

First common multiple of
1 and 4 = 4

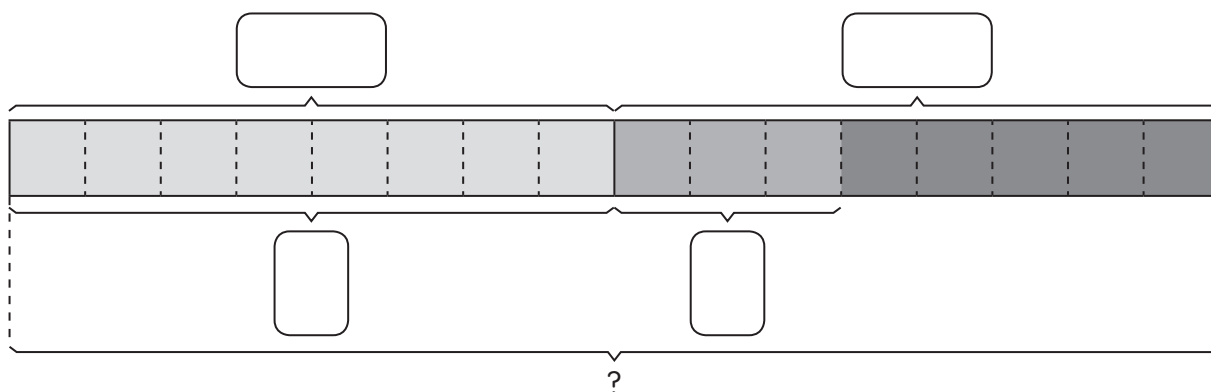
By equivalent fractions,

$$\frac{\boxed{1}}{\boxed{2}} \times \frac{\boxed{4}}{\boxed{4}} = \frac{4}{8}$$

So, the model needs to have
8 equal units.



- 4 Morgan had some stamps. She gave her best friend $\frac{1}{2}$ of her stamps. She then gave her brother $\frac{3}{8}$ of the remaining stamps. She had 10 stamps left in the end. How many stamps did she have at first?



Remainder = _____ part

To show _____ of the remaining stamps were given to her brother, further divide the remainder into _____ parts.

First common multiple of _____ and _____ = _____

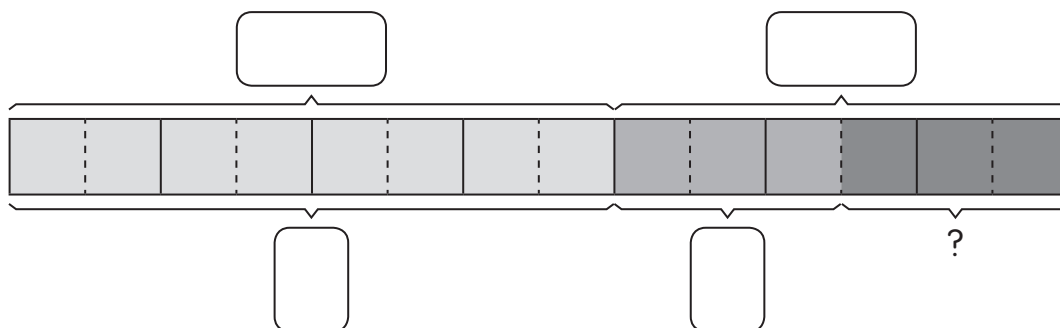
By equivalent fractions,

$$\frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

So, the model needs to have _____ equal units.



- 5 Jacob had \$910. He spent $\frac{4}{7}$ of the money on a lawn mower. He spent $\frac{1}{2}$ of the remaining money on plants. How much money did Jacob have left?



Remainder = _____ parts

To show _____ of the remainder was spent on the lawn mower, further divide the remainder into _____ parts.

First common multiple of _____ and _____ = _____

By equivalent fractions,

$$\frac{\boxed{}}{\boxed{}} \times \frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{}}$$

So, the model needs to have _____ equal units.



Solve. Show your work. Draw models to help you.

- 6 Gavin had 96 timber logs. He used $\frac{2}{3}$ of the logs to build a cabinet and used $\frac{5}{8}$ of the remaining logs to make a pet house. How many logs did he have left?

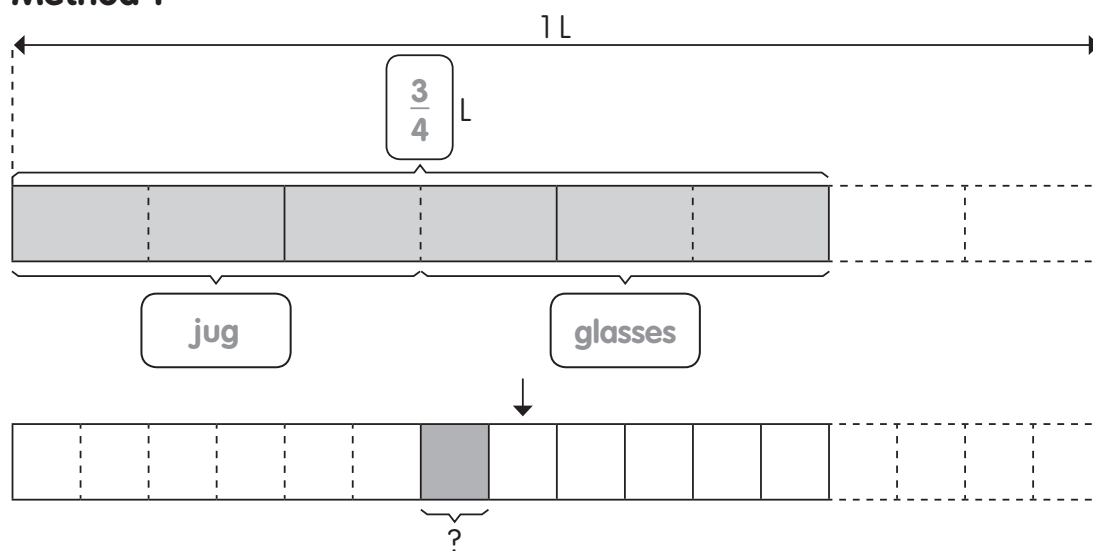
- 7 There are 140 students at an enrichment center. $\frac{3}{5}$ of the students take the bus to the center. $\frac{1}{4}$ of the remaining students walk to the center. The rest are driven to the center by their parents. How many students are driven to the center?

Solve. Show your work. Use the model to help you.

Example

Sarah makes $\frac{3}{4}$ liter of fruit punch. She pours $\frac{1}{2}$ of the fruit punch into a jug and the remaining fruit punch into 6 glasses. How many liters of fruit punch are in each glass?

Method 1



The model shows that:

16 units = 1 L

1 unit = $1 \div 16$

$= \frac{1}{16}$ L

$\frac{1}{16}$ liter of fruit punch is in each glass.

Method 2

$$\begin{aligned} \text{Fraction of fruit punch poured into the glasses} &= \frac{1}{2} \times \frac{3}{4} \\ &= \frac{3}{8} \end{aligned}$$

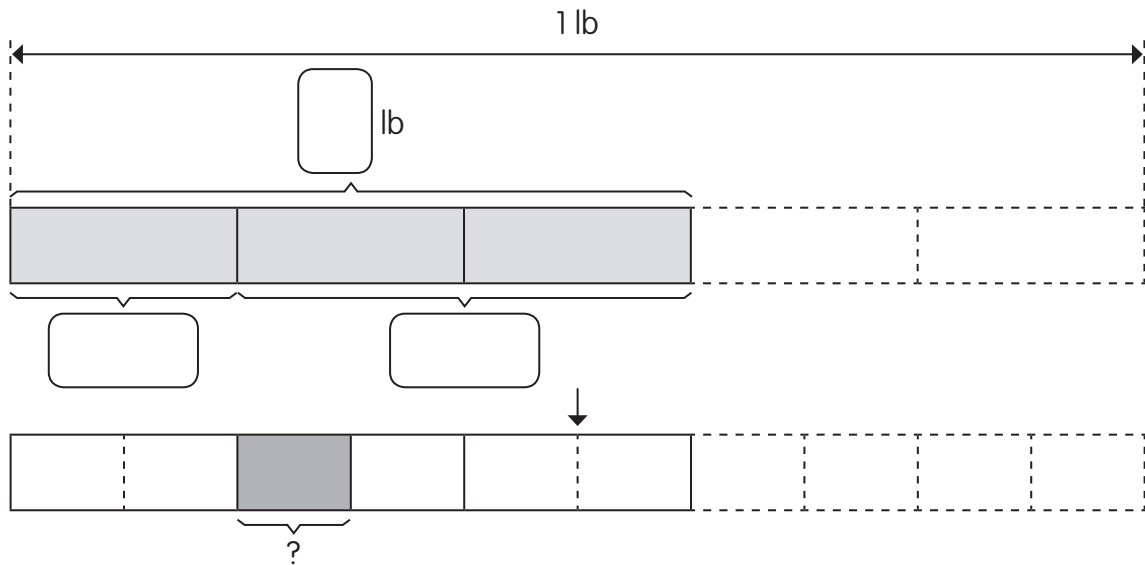
$\frac{3}{8}$ liter of fruit punch was poured into the glasses.

$$\begin{aligned} \text{Amount of fruit punch in each glass} &= \frac{\frac{3}{8}}{6} \\ &= \frac{3}{8} \times \frac{1}{6} \\ &= \frac{1}{16} \text{ L} \end{aligned}$$

$\frac{1}{16}$ liter of fruit punch is in each glass.

- 8 Sydney has $\frac{3}{5}$ pound of nuts. $\frac{1}{3}$ of the nuts are almonds and the rest are peanuts. Sydney packs the peanuts equally into 4 jars. What is the weight of the peanuts in each jar?

Method 1



Method 2

Fraction of nuts that are peanuts = _____ \times _____

= _____

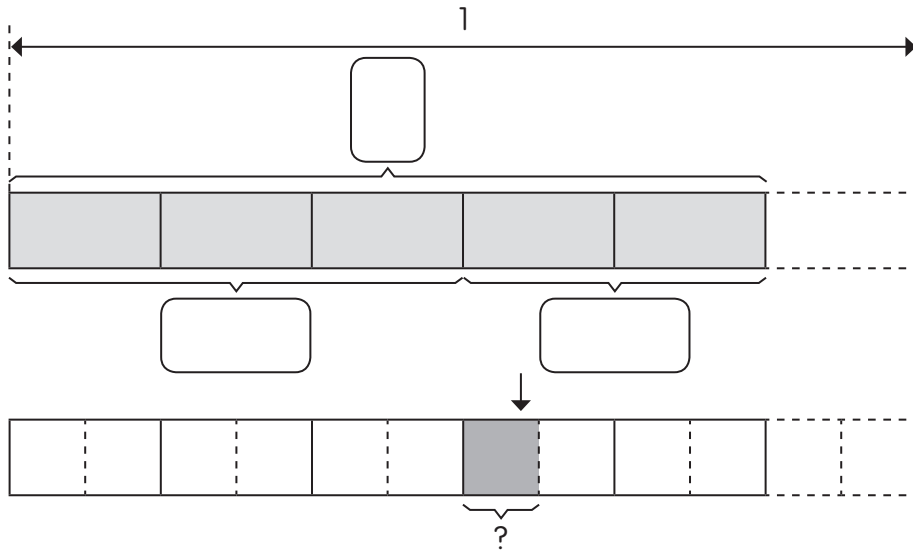
Weight of peanuts in each jar = _____ \div _____

= _____ \times _____

= _____

- 9 Ms. Rivera shares $\frac{5}{6}$ of a pizza with some students. The boys eat $\frac{3}{5}$ of the pizza. 4 girls eat the remaining pizza. What fraction of the pizza does each girl eat?

Method 1



Method 2

Fraction of pizza that the girls eat = _____ \times _____

= _____

Fraction of pizza each girl eats = _____ \div _____

= _____ \times _____

= _____

Solve. Show your work. Draw models to help you.

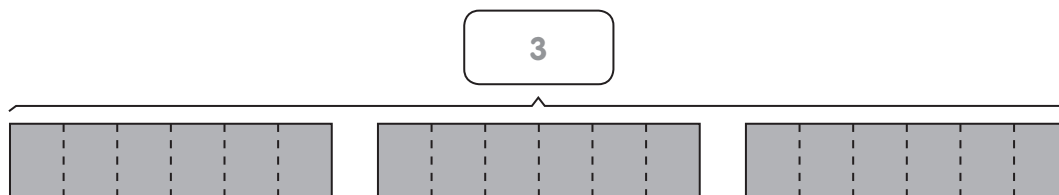
- 10 Brooke had $\frac{7}{8}$ meter of ribbon. She used $\frac{2}{7}$ of it to wrap a package. She used the remainder to decorate 10 bookmarks. What was the length of ribbon used for each bookmark?

- 11 Henry collects $\frac{5}{6}$ gallon of rainwater. He uses $\frac{1}{5}$ of the rainwater to wash his gardening tools and the remainder to water 8 potted plants. How many gallons of rainwater does he use to water each potted plant?

Solve. Show your work. Use the model to help you.

Example

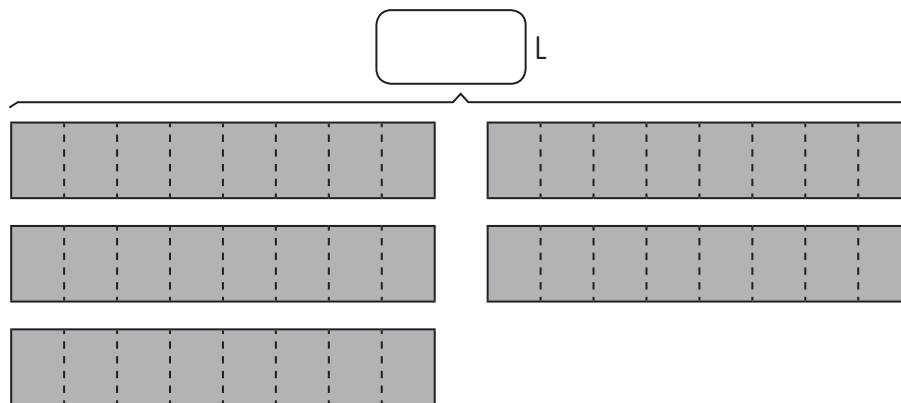
Luke has 3 pies. He gives each of his friends $\frac{1}{6}$ of a pie. How many friends does he give his pies to?



$$\begin{aligned} \text{Number of friends Luke gives his pies to} &= \underline{3} \div \underline{\frac{1}{6}} \\ &= \underline{3} \times \underline{6} \\ &= \underline{18} \end{aligned}$$

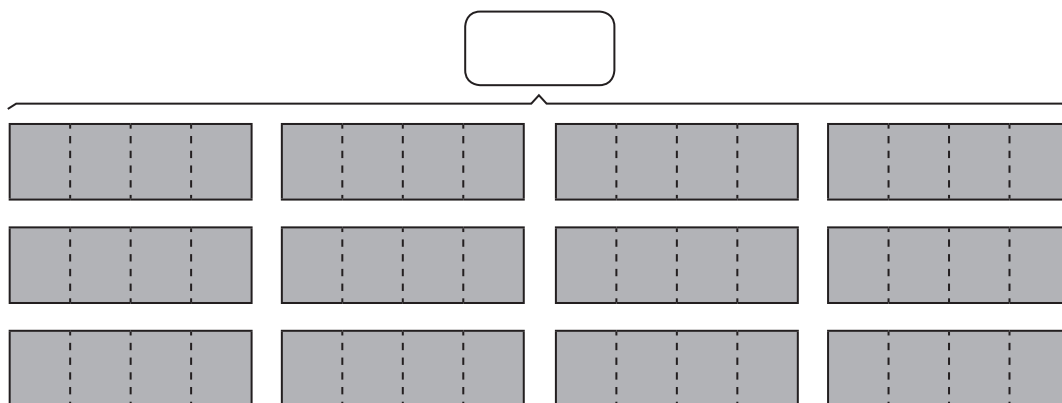
Luke gives his pies to 18 friends.

- 12** Each toddler in a childcare center drinks $\frac{1}{8}$ liter of milk. There are 5 liters of milk. How many toddlers are there?



$$\begin{aligned} \text{Number of toddlers} &= \underline{\hspace{2cm}} \div \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \times \underline{\hspace{2cm}} \\ &= \underline{\hspace{2cm}} \end{aligned}$$

- 13 Each child in a kindergarten class was given $\frac{1}{4}$ of an apple. There were 12 apples. How many children were there?



Number of children = _____ \div _____

= _____ \times _____

= _____

Solve. Show your work. Draw a model to help you.

- 14 A carpenter takes $\frac{1}{2}$ a day to make a shelf. How many shelves does he make in a week?



Chapter

2

Reteach

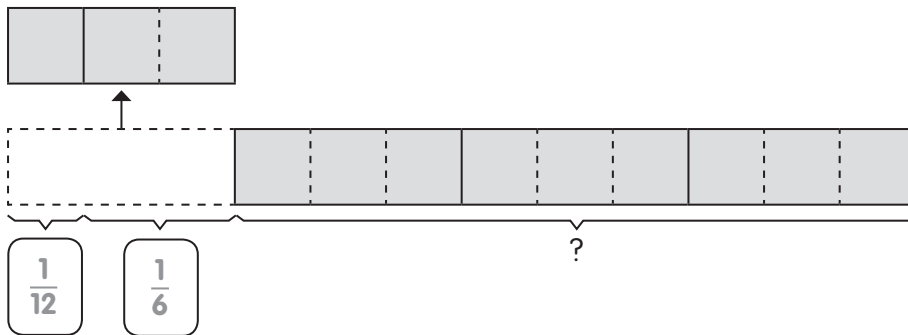
Fractions and Mixed Numbers

Activity 4 Real-World Problems: Fractions and Mixed Numbers

Solve. Show your work. Use the bar model to help you.

Example

Briella baked a pie. She ate $\frac{1}{12}$ of the pie and gave $\frac{1}{6}$ of the pie to her neighbors. What fraction of the pie was left?



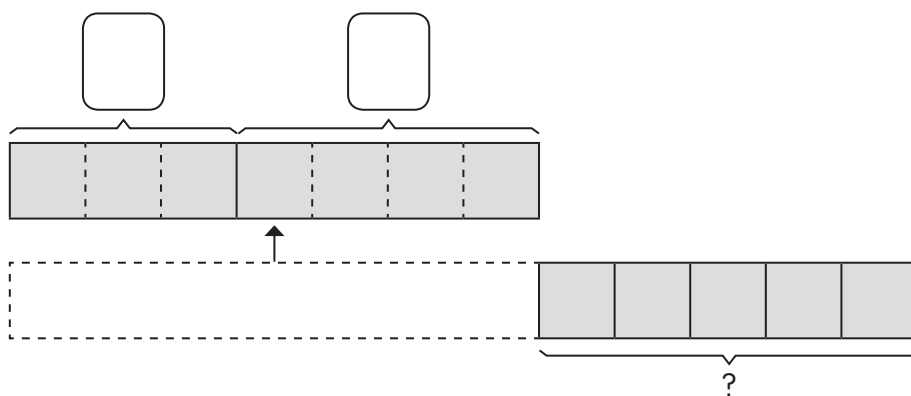
$$\begin{aligned}\frac{1}{12} + \frac{1}{6} &= \frac{1}{12} + \frac{2}{12} \\ &= \frac{3}{12} \\ &= \frac{1}{4}\end{aligned}$$

Briella ate and gave away $\frac{1}{4}$ of the pie.

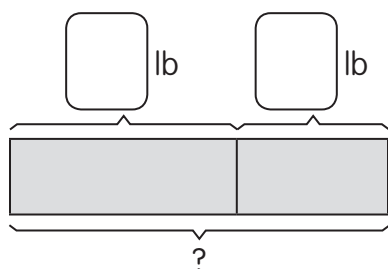
$$1 - \frac{1}{4} = \frac{3}{4}$$

$\frac{3}{4}$ of the pie was left.

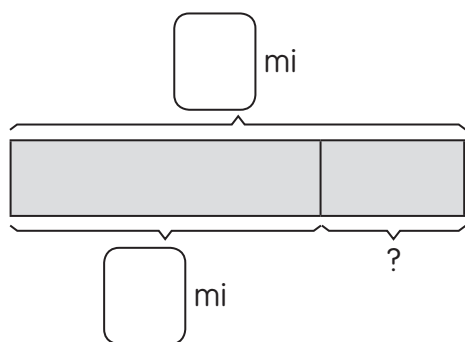
- 1 Robert spent $\frac{1}{4}$ of his pocket money on dinner, and $\frac{1}{3}$ of his pocket money on dessert. What fraction of Robert's pocket money was left?



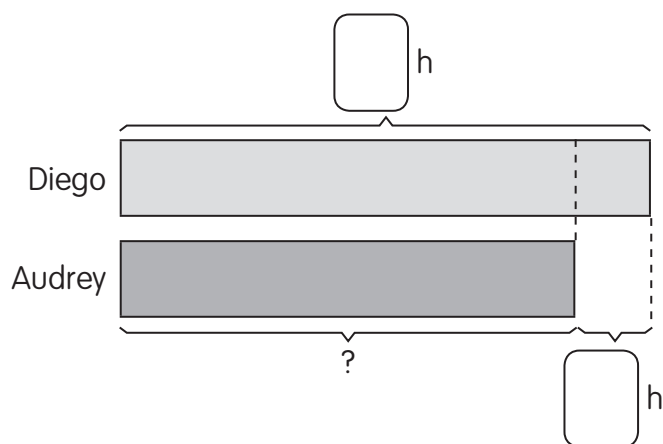
- 2 Liam has $2\frac{1}{4}$ pounds of flour. Malia has $1\frac{1}{2}$ pounds of flour. How many pounds of flour do they have altogether?



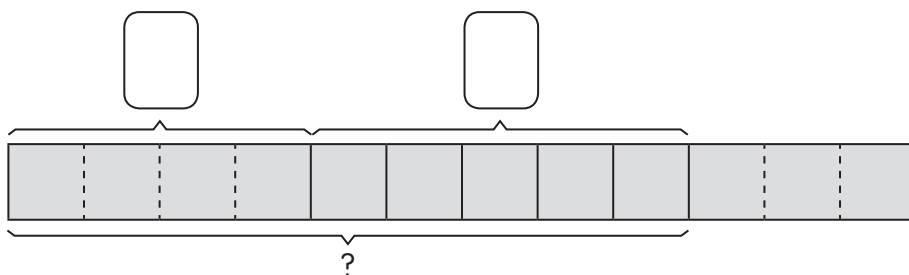
- 3 A train station was 6 miles away from Timothy's home. He traveled by bus for $4\frac{1}{8}$ miles and walked the remaining distance to get to the train station. Find the distance Timothy walked.



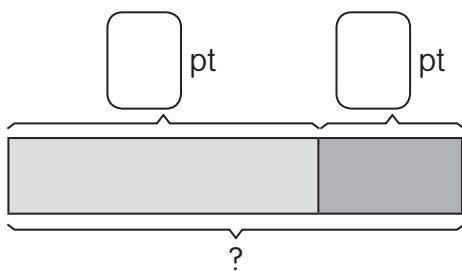
- 4 Diego jogged for $\frac{7}{10}$ hour. Audrey took $\frac{1}{6}$ hour less than Diego to jog the same distance. How long did Audrey take?



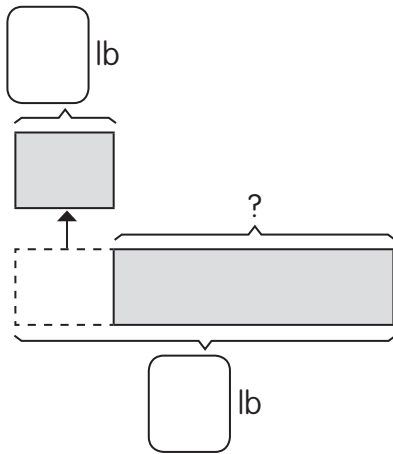
- 5 Kwan had some melons. He gave $\frac{1}{3}$ of the melons to Emily and $\frac{5}{12}$ of the melons to Blake. What fraction of the melons did Kwan give away?



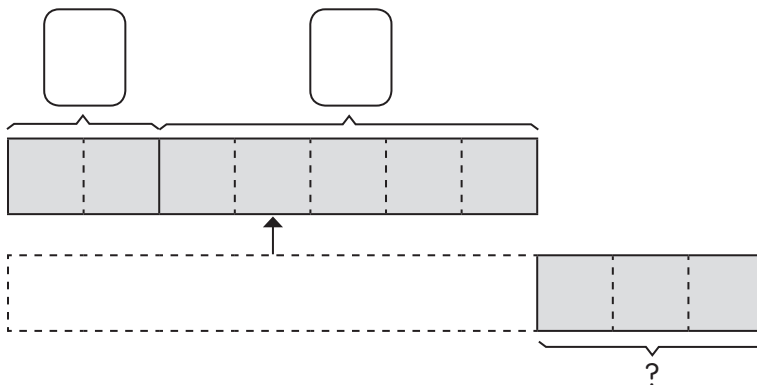
- 6 Haley drank $\frac{5}{6}$ pint of apple juice in the morning. She drank $\frac{2}{5}$ pint of orange juice in the afternoon. How many pints of fruit juice did Haley drink altogether?



- 7 Olivia has $5\frac{1}{4}$ pounds of apples. She uses $1\frac{3}{8}$ pounds of apples to make some fruit tarts. How many pounds of apples does she have left?



- 8 Victor ate $\frac{1}{5}$ of a cake. Sari and Rebeca ate $\frac{1}{2}$ of the cake. What fraction of the cake was left?



Solve. Show your work. Draw bar models to help you.

- 9 $\frac{2}{3}$ of the total number of students in a school were gathered in the hall. $\frac{1}{6}$ of the total number of students in the school left the hall. Another $\frac{1}{9}$ of the total number of students then arrived at the hall. What fraction of the total number of students were in the hall in the end?
- 10 Savannah walked $1\frac{1}{5}$ miles to a library, and another $\frac{3}{4}$ mile to her school in the morning. She walked $1\frac{1}{2}$ miles to her home directly after school in the afternoon. Find the total distance that she walked.

- 11 Ignacio had $2\frac{1}{4}$ liters of orange juice in a jug. He drank $1\frac{1}{8}$ liters of the orange juice. He then refilled the orange juice in the jug to 2 liters. How many liters of orange juice did he refill?

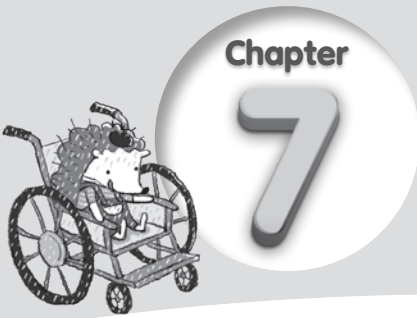
- 12 Ashley and Samuel plan to walk a total distance of 2 miles. Ashley walks $\frac{5}{8}$ mile. Samuel walks $\frac{3}{5}$ mile. Find the remaining distance they need to cover.

- 13 Chloe bought 3 pizzas for a party. She ate $\frac{1}{4}$ of a pizza. Her friends ate $2\frac{5}{8}$ pizzas. What fraction of the pizzas was left over?

- 14 Kanda spent $\frac{1}{6}$ of her day reading. She spent $\frac{1}{4}$ of her day painting. What fraction of her day was **not** spent reading and painting?

- 15 James had $4\frac{1}{2}$ pounds of potatoes. He sold $2\frac{1}{8}$ pounds of potatoes in the morning and $1\frac{1}{4}$ pounds of potatoes in the afternoon. How many pounds of potatoes did he have left?

- 16 Mr. Hill adds $\frac{7}{8}$ of a bag of fertilizer to his garden. His neighbor Ms. Long adds $1\frac{1}{6}$ bags of fertilizer to her garden. How much more fertilizer does Ms. Long add than Mr. Hill?



Chapter

7

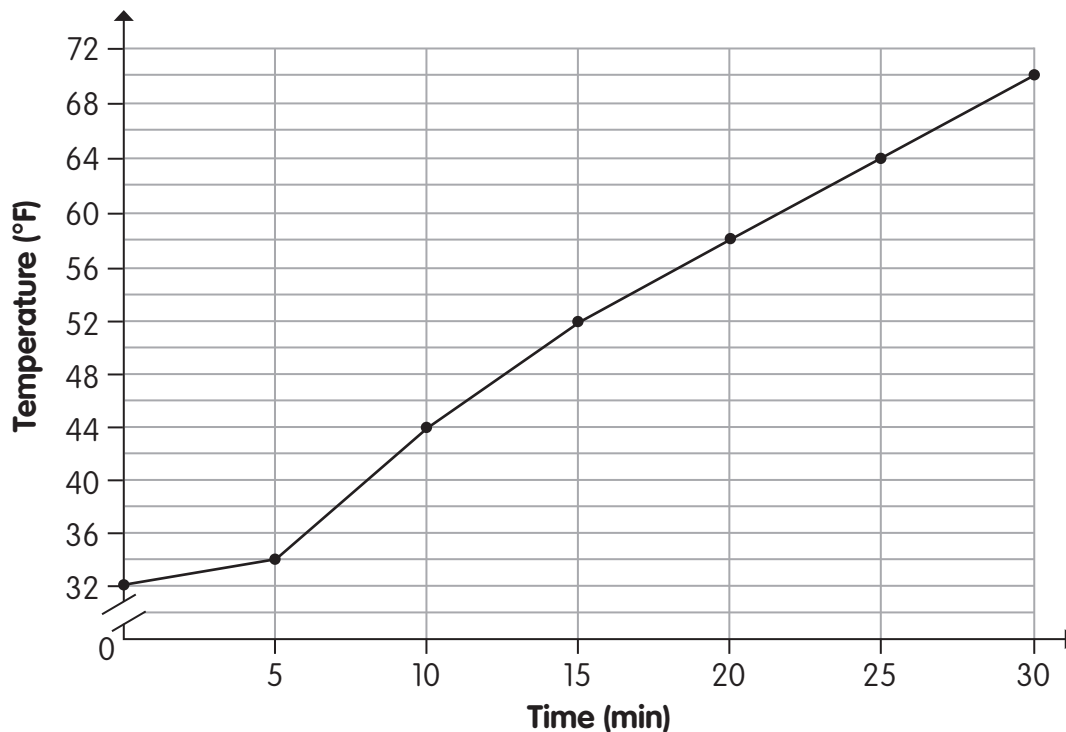
Reteach

Line Plots and the
Coordinate Plane**Activity 2 Graphing on a Coordinate Plane**

The table shows the time taken for an ice cube to melt and reach room temperature.

Time (min)	0	5	10	15	20	25	30
Temperature (°F)	32	34	44	52	58	64	70

The data can be represented in a line graph as shown.

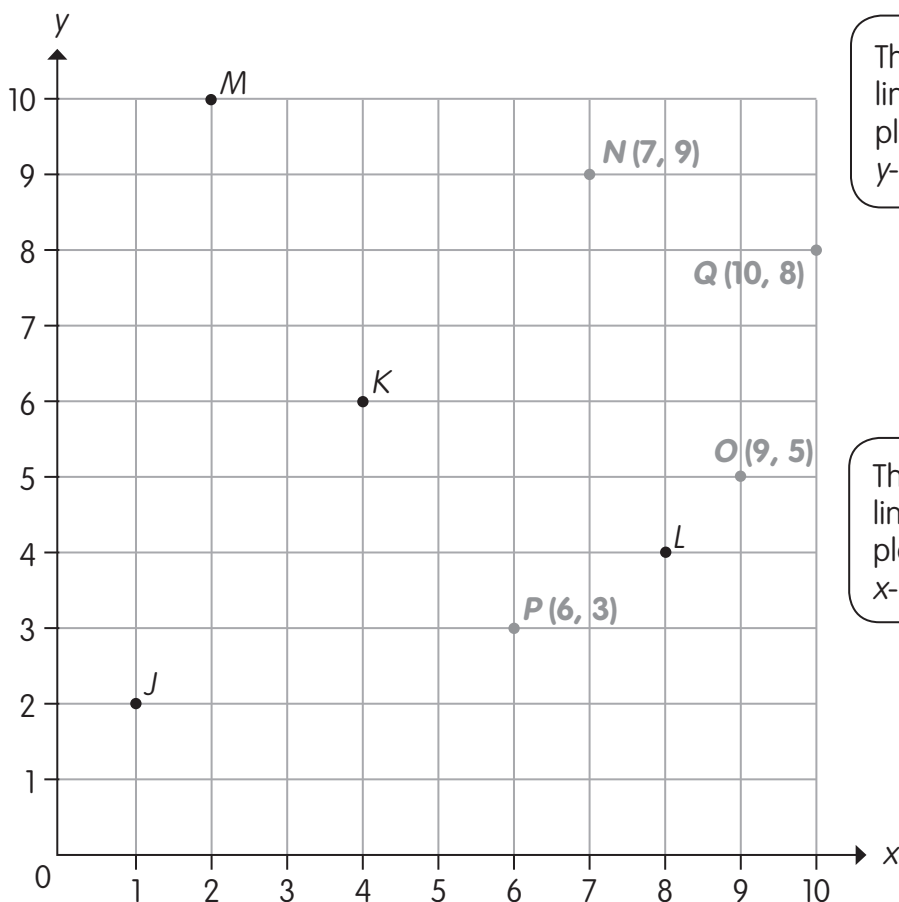


Use the line graph to answer 1, 2, and 3.

- 1 What was the temperature of the ice cube at $12\frac{1}{2}$ minutes?
- 2 At which minute was the temperature of the ice cube at 70 degrees Fahrenheit recorded?
- 3 What was the difference in temperature between the 5th and 10th minute?

Use the coordinate plane to answer a to e.

Example



The vertical number line on the coordinate plane is called the y-axis.



The horizontal number line on the coordinate plane is called the x-axis.



The origin is where the x-axis and y-axis intercept. Its coordinate are (0, 0).



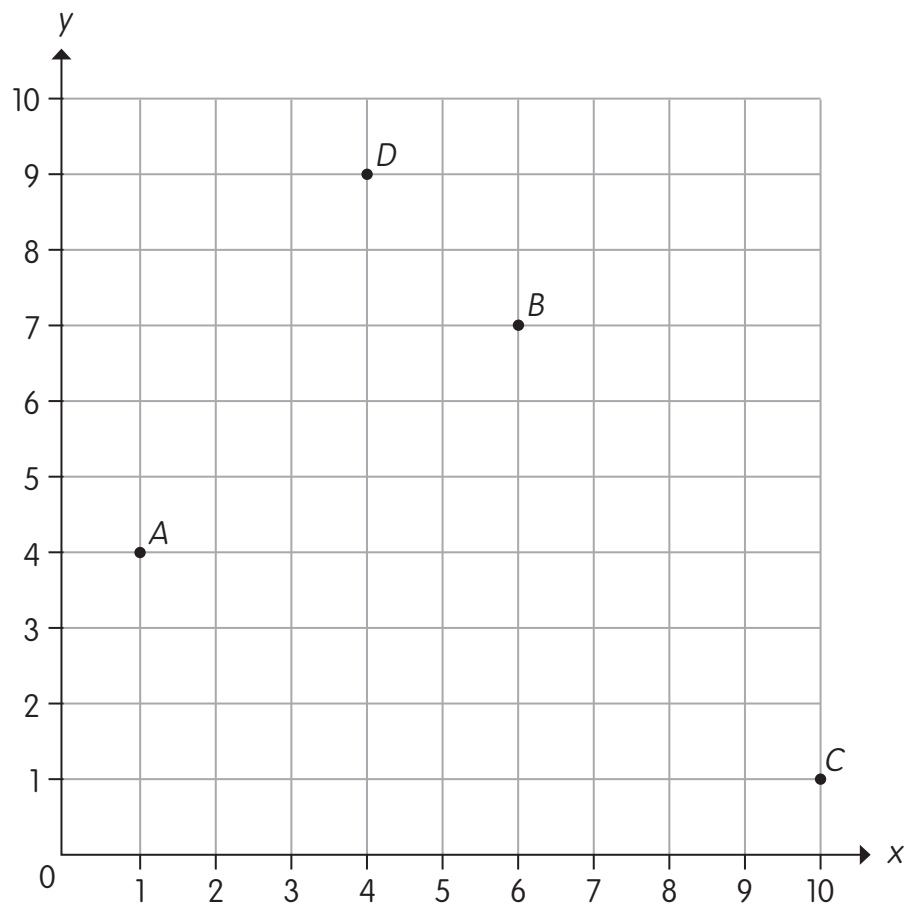
Name the x-coordinate first before the y-coordinate. Point J is 1 unit to the right of y-axis and 2 units above the x-axis, so the coordinates of J are (1, 2).

- Coordinates of J = (1, 2)
- Coordinates of K = (4, 6)
- Coordinates of L = (8, 4)
- Coordinates of M = (2, 10)
- Plot the points N(7, 9), O(9, 5), P(6, 3), and Q(10, 8).

Coordinates of Point N is (7, 9). This means it is 7 units to the right of y-axis and 9 units above the x-axis. Find the point and plot N.



Use the coordinate plane to answer 4 and 8.



4 Coordinates of A = _____

5 Coordinates of B = _____

6 Coordinates of C = _____

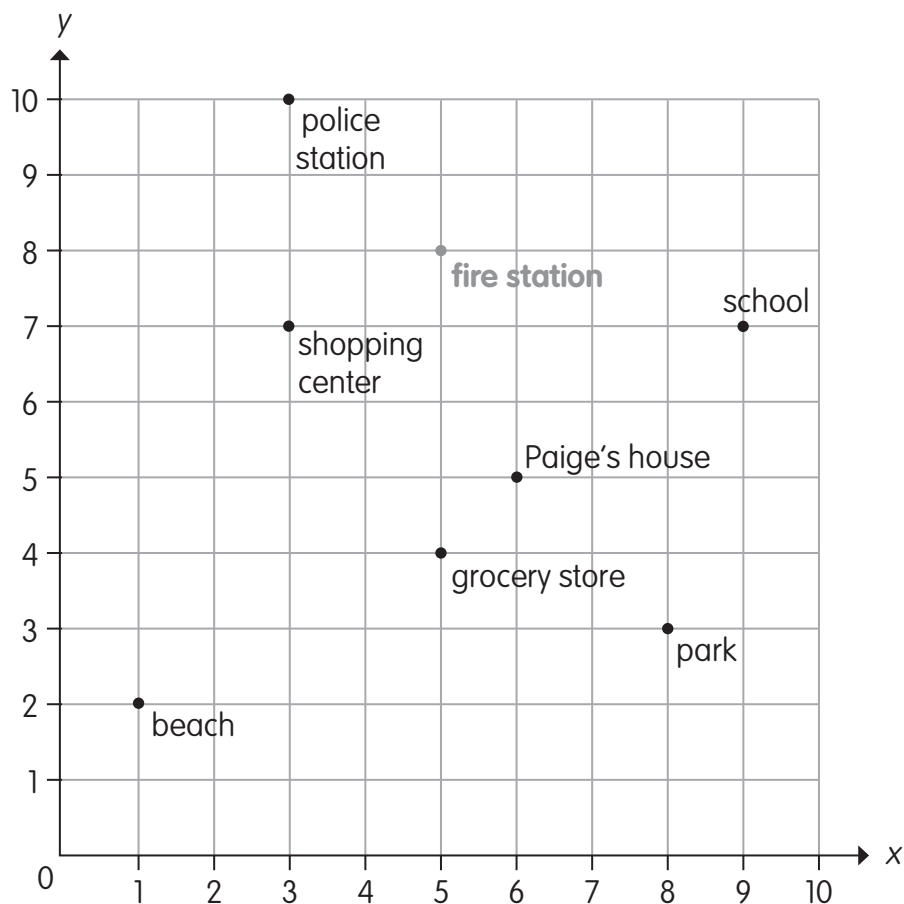
7 Coordinates of D = _____

8 Plot the points $E(3, 2)$, $F(8, 10)$, $G(9, 6)$, and $H(4, 4)$.

Use the coordinate plate to answer a to e.

Example

The coordinate plane shows the map of Paige's neighborhood.

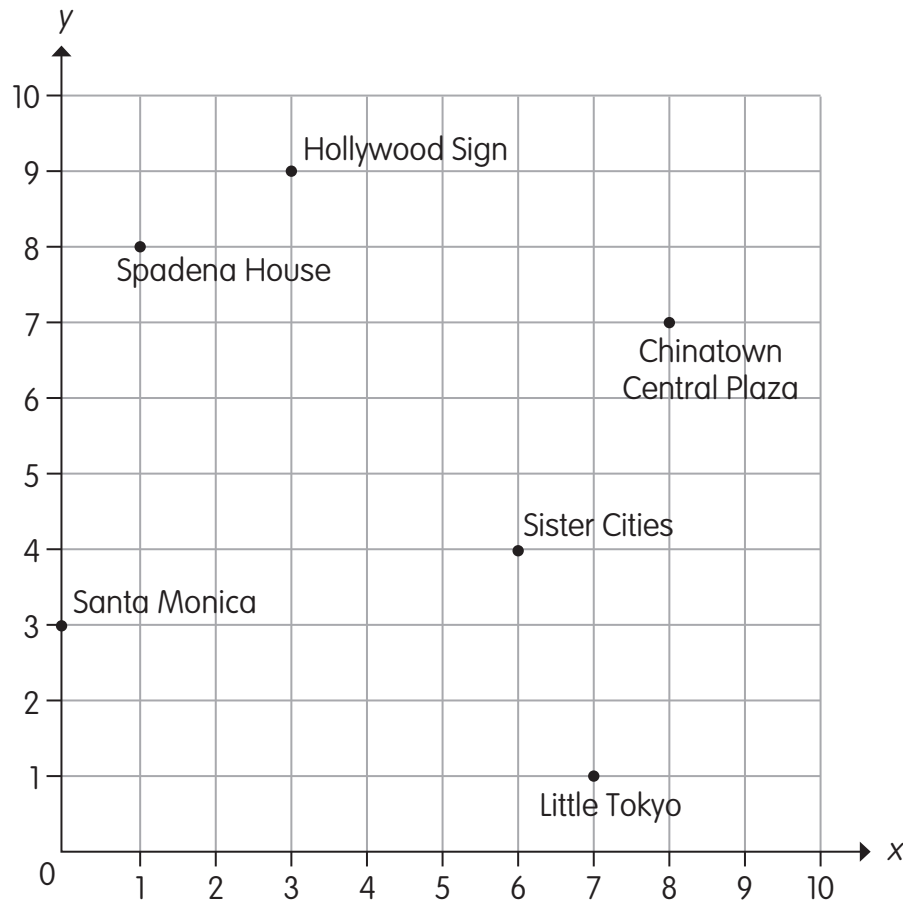


- a What is the ordered pair representing Paige's house? (6, 5)
- b Paige walks to school in the morning. What are the coordinates for her location in the morning? (9, 7)
- c Mr. Jones is 4 units to the right and 2 units above of the shopping center. What is the ordered pair of his location? (7, 9)
- d The fire station is 1 unit to the left and 3 units above of Paige's house. Draw the location of the fire station on the coordinate plane.
- e Mateo describes the ordered pair of the police station as (3, 9). Is he correct? Explain.

No. He is not correct. Police station is at (3, 10). He reads the y-coordinate wrongly.

Use the coordinate plane to answer 9 to 13.

The coordinate plane shows the map of part of Los Angeles.



- 9 What is the ordered pair representing the Hollywood Sign? _____
- 10 Kaylee is at Santa Monica. What are the coordinates for her location?

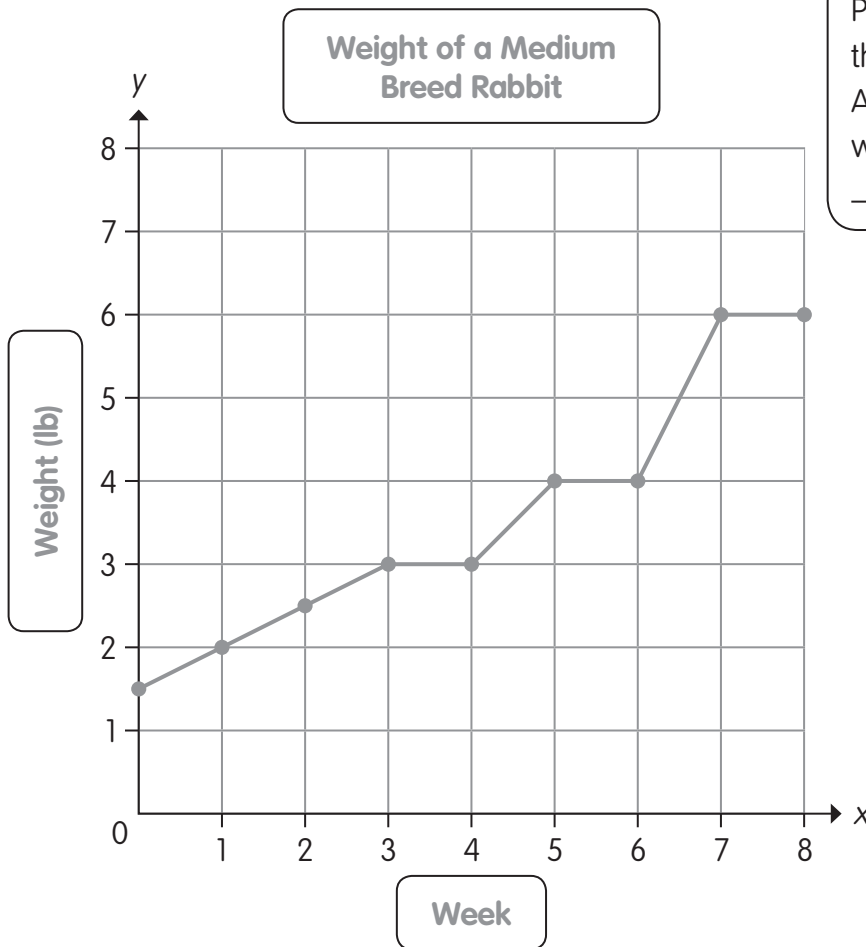
- 11 Carlos is 2 units to the left and 3 units above of Sister Cities. What is the ordered pair of his location? _____
- 12 The Farmers' Market is 5 units to the right and 3 units above of Santa Monica. Draw the location of Farmers' Market on the coordinate plane.
- 13 Dara describes the ordered pair of Chinatown Central Plaza as (9, 7). Is he correct? Explain.

Example

The table shows the weight of a medium breed rabbit from 0 to 8 weeks old.

Week	0	1	2	3	4	5	6	7	8
Weight (lb)	1.5	2	2.5	3	3	4	4	6	6

Use the data in the table to make a line graph and label axes.
Use interval of 1 on the horizontal and vertical scale.



Plot the points based on the values in the table.
At Week 0, the weight of the rabbit is 1.5 pounds.



Use the data in the graph to answer a to c.

- a** Between which two weeks was the rabbit's weight at 3.5 pounds?

Between Weeks 4 and 5.

Find the grid line at 3.5 pounds on the vertical axis. Then, see where it crosses on the graph.



- b** Between which two weeks was the rabbit's weight 5 pounds?

Between Weeks 6 and 7.

Find the grid line at 5 pounds on the vertical axis. Then, see where it crosses on the graph.



- c** When did the greatest increase in the rabbit's weight occur?

Between Weeks 6 and 7.

The steeper the line, the greater the increase in the rabbit's weight.

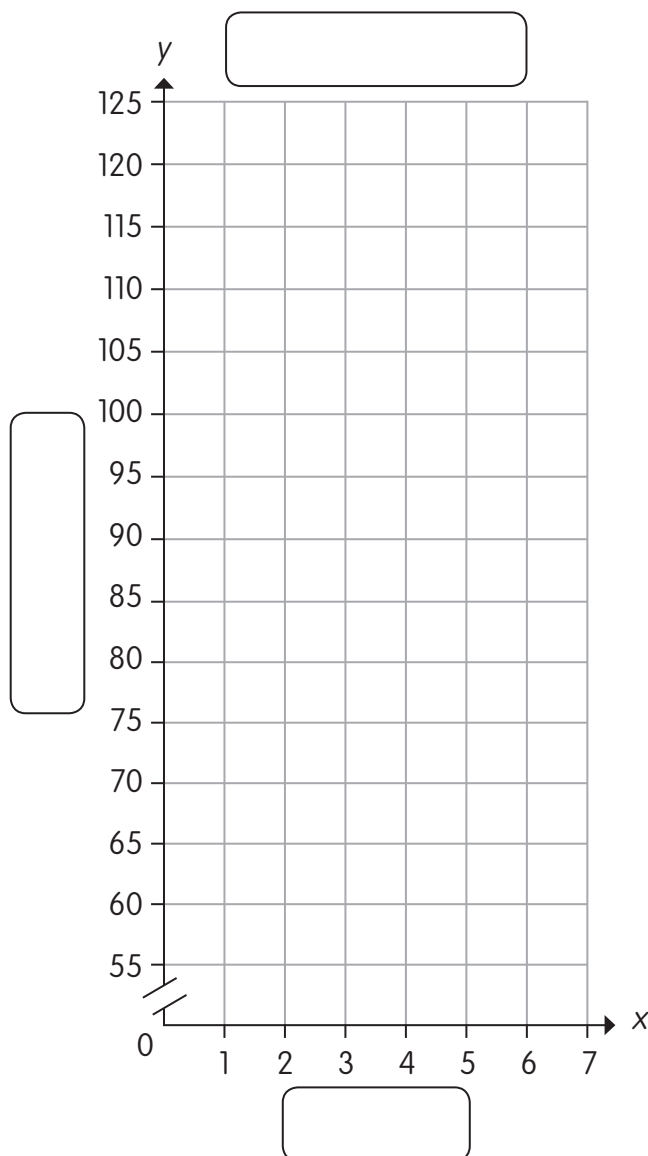


The table shows Kiri's height from 0 to 7 years old.

Year	0	1	2	3	4	5	6	7
Height (cm)	55	75	90	105	110	115	120	125

Use the data in the table to make a line graph and label axes.
Use interval of 1 on the horizontal scale and 5 on the vertical scale.

14



Plot the points based on the values in the table.
At Year 0, Kiri's height is 55 centimeters.



Use the data in the graph to answer 15 to 17.

- 15 Between which two years was Kiri's height at 80 centimeters?

Between Years _____ and _____.

Find the grid line at 80 centimeters on the vertical axis. Then, see where it crosses on the graph.



- 16 Between which two years was Kiri's height at 100 centimeters?

Between Years _____ and _____.

Find the grid line at 100 centimeters on the vertical axis. Then, see where it crosses on the graph.



- 17 When did the greatest increase in Kiri's height occur?

Between Years _____ and _____.

The steeper the line, the greater the increase in Kiri's height.

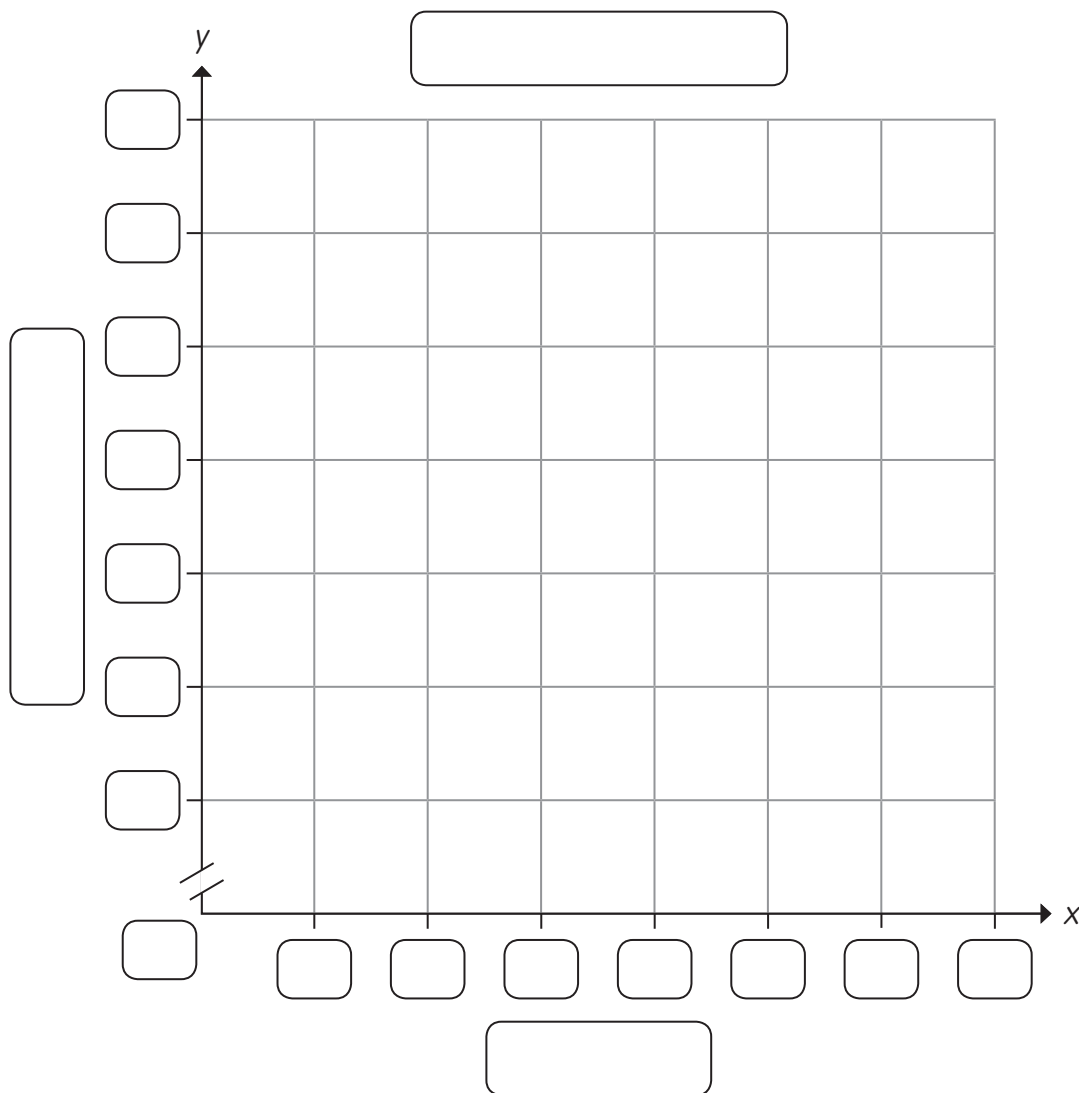


The table shows Seattle's temperature from Day 1 to Day 7 in March.

Day	1	2	3	4	5	6	7
Temperature (°F)	62	64	70	70	68	70	74

Use the data in the table to make a line graph and label axes.
Use interval of 1 on the horizontal scale and 2 on the vertical scale.

18



Use the data in the graph to answer 19 to 21.

- 19 Between which two days was Seattle's temperature at 72 degrees Fahrenheit recorded?
- 20 Which three days were Seattle's temperature at 70 degrees Fahrenheit recorded?
- 21 When did the greatest increase in Seattle's temperature occur?