UNIT 1

STUDENT BOOK 5 LESSON

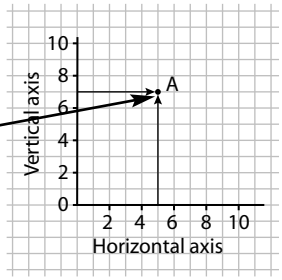
Plotting Points on a Coordinate Grid

At Home At School

Quick Review

➤ We use an **ordered pair** to describe the **coordinates** of a point on a grid.

The coordinates of point A are (5, 7).



The **origin** is the point where the horizontal and vertical axes meet.

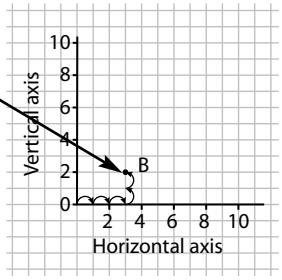
In an ordered pair:

- The first number tells the horizontal distance from the origin.
- The second number tells the vertical distance from the origin.

➤ The coordinates of point B are (3, 2).

To **plot** point B:

Start at 0, move 3 squares right, then move 2 squares up.

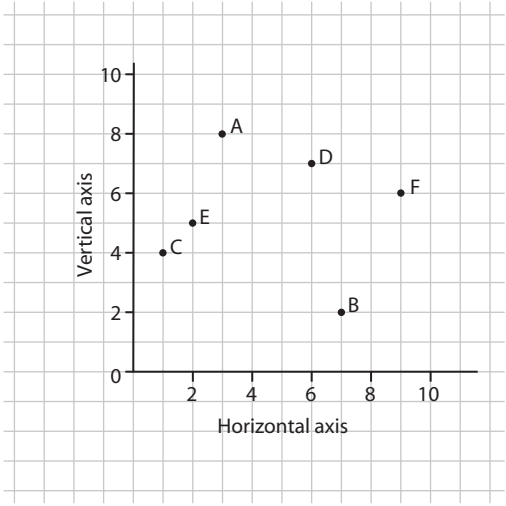


Try These

1. a) Name the letter on the grid represented by each ordered pair.

(2, 5) ____ (6, 7) ____ (1, 4) ____

(9, 6) ____ (7, 2) ____ (3, 8) ____



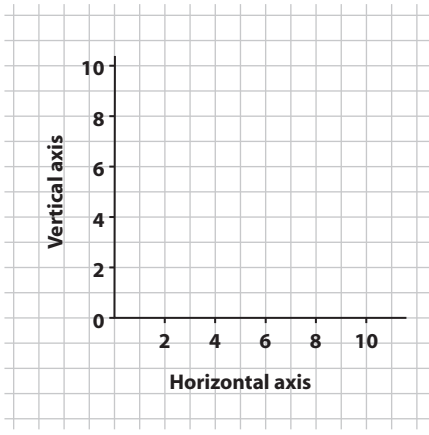
b) Plot each point on the grid.

G(5, 4), H(10, 10), I(0, 9),

J(0, 2), K(8, 1), L(10, 4)

Practice

1. Plot each set of ordered pairs on the coordinate grid.
Join the points in order.
Join the last point to the first point.
Name each polygon you have drawn.



A: (8, 6), (6, 6), (6, 8), (8, 8)

_____

B: (0, 3), (4, 0), (6, 0), (2, 3)

_____

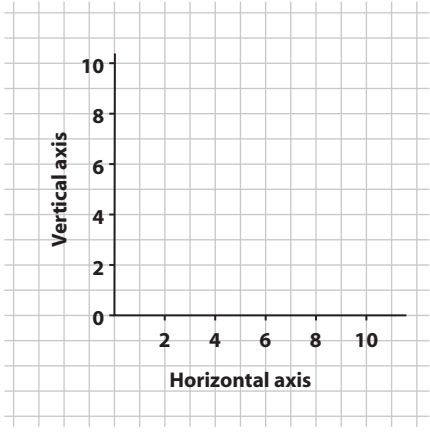
C: (1, 6), (1, 10), (4, 10), (4, 6)

_____

D: (7, 1), (6, 3), (8, 5), (10, 3), (9, 1)

_____

2. Plot 6 points on the grid.
Label the points A to F.
Record the ordered pairs.



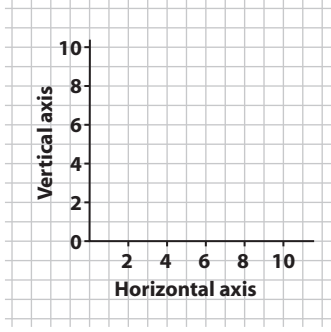
A: _____ B: _____

C: _____ D: _____

E: _____ F: _____

Stretch Your Thinking

(2, 5) and (7, 5) are 2 vertices of a parallelogram with area 10 square units.
Plot the points for the 2 given vertices.
What are the coordinates of the other vertices?
Give as many answers as you can.



_____

_____

_____

_____

UNIT 1

STUDENT BOOK 6 LESSON

Drawing the Graph of a Pattern

Quick Review

At Home At School

Here are some ways to represent a pattern.

➤ Model the pattern on grid paper.

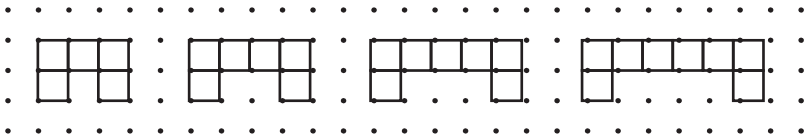
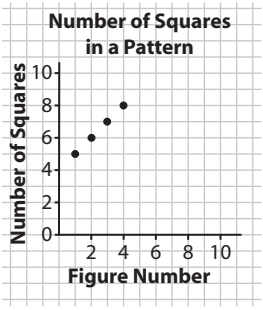


Figure 1 Figure 2 Figure 3 Figure 4

➤ Make a table.

Figure Number	Number of Squares	Ordered Pair
1	5	(1, 5)
2	6	(2, 6)
3	7	(3, 7)
4	8	(4, 8)

➤ Draw a graph.



Try These

1. Henry made this pattern.

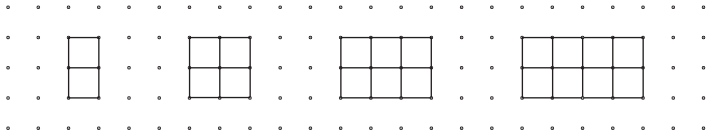
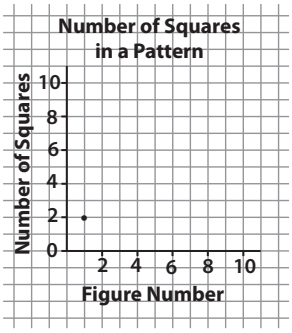


Figure 1 Figure 2 Figure 3 Figure 4

a) Complete the table.

Figure Number	Number of Squares	Ordered Pair
1	2	(1, 2)

b) Graph the pattern



Practice

1. a) Describe the relationship shown in the table.

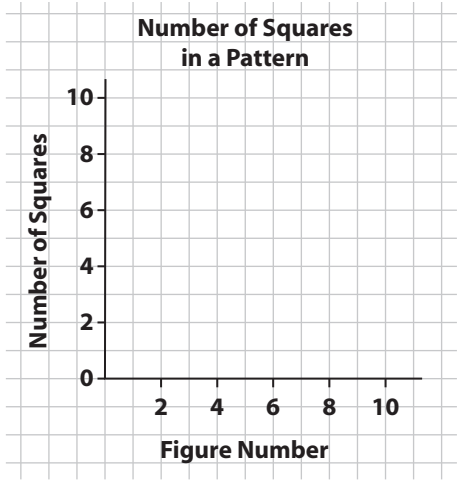
Figure Number	1	2	3	4	5
Number of Squares	1	3	5	7	9

_____

_____

b) Draw squares on the grid to model the pattern.

c) Graph the pattern.



d) How many squares are needed for Figure 10?

_____

e) Which figure has 29 squares?

_____

f) Which figure has 51 squares?

_____

2. Draw a pattern to model the data in the table.

Figure Number	1	2	3	4
Number of Triangles	1	2	4	8

Stretch Your Thinking

Use the table in question 2.

How many triangles are in Figure 10? _____

Which figure has 8192 triangles? _____