Name Key

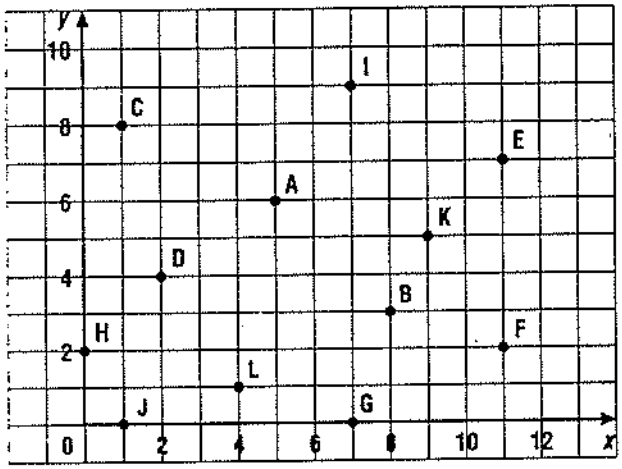
5.4 Graphing Ordered Pairs

MATHPOWER™ . p. 159

When ordered pairs are plotted on a grid, the horizontal number line is called the ***x*-axis**. The vertical number line is called the ***y*-axis**. The two lines meet at the **origin**.

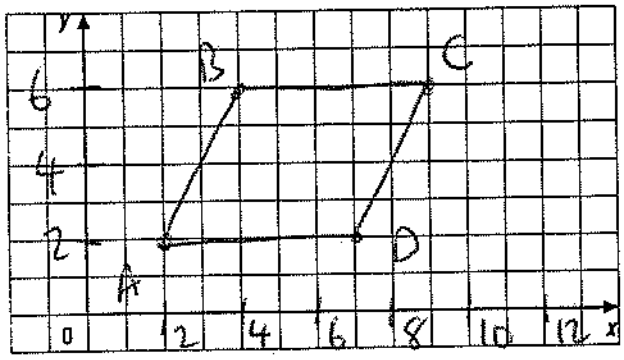
The first number of an ordered pair is the ***x*-coordinate**. The second number is the ***y*-coordinate**.

1. State the coordinates of each point.



A (5,6) B (8,3) C (1,8)
D (2,4) E (11,7) F (11,2)
G (7,0) H (0,2) I (7,9)
J (1,0) K (9,5) L (4,1)

2. a) Plot the points A(2, 2), B(4, 6), C(9, 6), and D(7, 2) on the grid, and join the points in the order given. Join the last point to the first point.

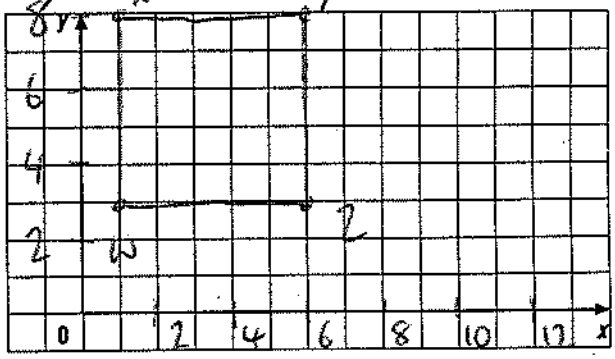


b) Identify the figure and calculate its area, in square units.

parallelogram
A = 20 square units

3. The points W(1, 3), X(1, 8), and Y(6, 8) are 3 vertices of a square.

a) Plot the points on the grid.



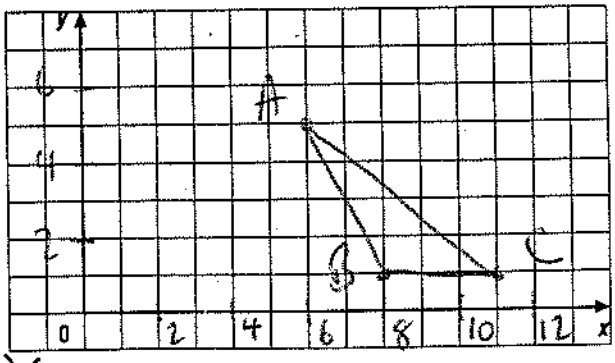
b) Find the coordinates of Z so that WXYZ is a square.

(6,3)

c) Calculate the perimeter and the area of the square.

P = 20
A = 25

4. a) Plot the points A(6, 5), B(8, 1), and C(11, 1) on the grid, and join the points in order. Join the last point to the first point.



b) Classify the triangle formed.

c) Calculate its area, in square units.

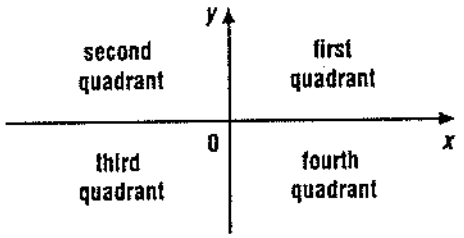
6 square units

Name Key

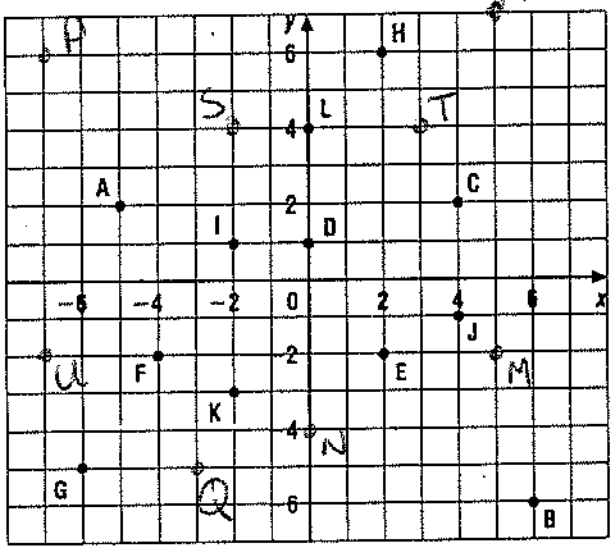
5.5 Graphing on the Coordinate Plane

MATHPOWER™ _ ; pp. 160–161

The x- and y-axes divide the coordinate plane into 4 quadrants.



1. a) State the coordinates of each point.



A (-5,2) B (6,-6) C (4,2)
D (0,1) E (2,-2) F (-4,-2)
G (-6,-5) H (2,6) I (-2,1)
J (4,-1) K (-2,-3) L (0,4)

b) Plot each of the following points on the grid in part a).

M(5, −2), N(0, −4), P(−7, 6), Q(−3, −5), R(5, 7), S(−2, 4), T(3, 4), U(−7, −2)

c) Name 3 points on the y-axis.

L, D, N

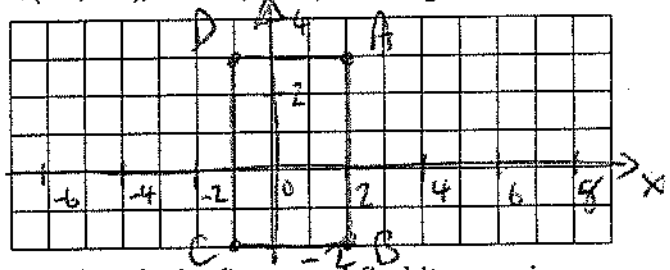
d) Name 3 points in the third quadrant.

3 of F, Q, K, G, U

e) Name 3 points in the fourth quadrant.

3 of E, J, M, B

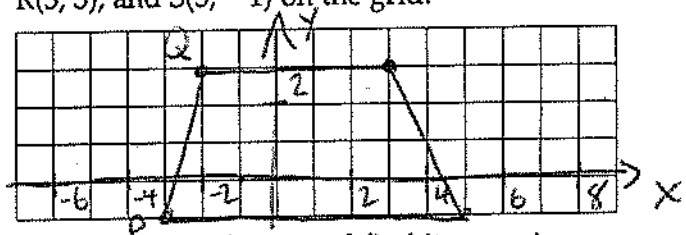
2. a) Plot the points A(2, 3), B(2, −2), C(−1, −2), and D(−1, 3) on the grid.



b) Identify the figure and find its area, in square units.

rectangle 15 square units

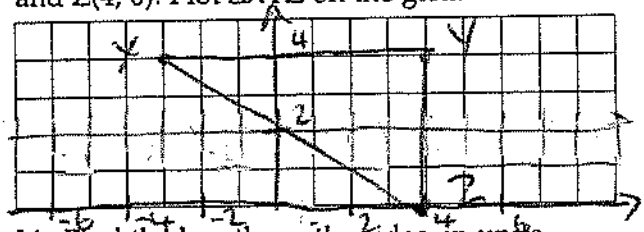
3. a) Plot the points P(−3, −1), Q(−2, 3), R(3, 3), and S(5, −1) on the grid.



b) Identify the figure ~~and find its area, in square units.~~

trapezoid A=26

4. a) ΔXYZ has vertices X(−3, 4), Y(4, 4), and Z(4, 0). Plot ΔXYZ on the grid.



b) Find the lengths of the sides, in units.

XY = 7 YZ = 4 XZ = 8.1

c) Calculate the perimeter, in units, and the area, in square units, of the triangle.

P = 19.1 A = 14