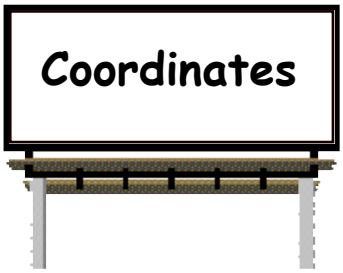
Chapter 12



Exercise 1

1. Six classrooms in a school are shown on the coordinate grid map.

   Write down the coordinates of :-

   (a) the Maths room **M**.

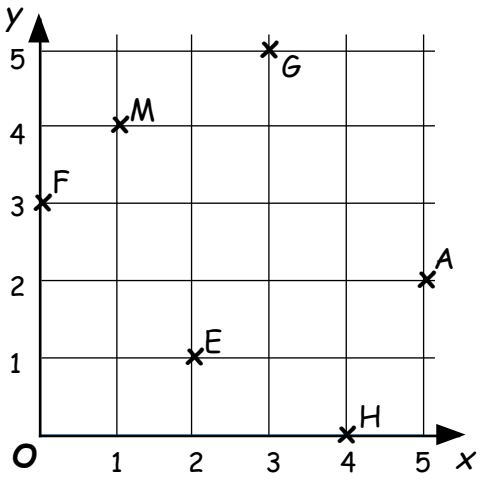
   (b) the English room **E**.

   (c) the Geography room **G**.

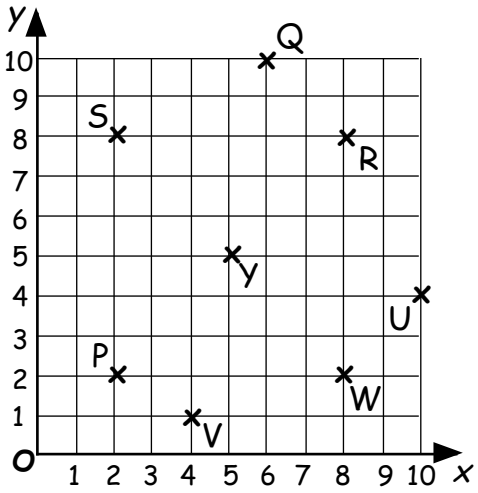
   (d) the History room **H**.

   (e) the French room **F**.

   (f) the Art room **A**.



2.



(a) Which point has coordinates :-

(i) (4, 1) (ii) (10, 4)

(iii) (2, 8) (iv) (5, 5) ?

(b) Write down the coordinates of :-

(i) Q (ii) R

(iii) P (iv) W.

(c) When four of the points are joined a square is formed.

(i) Which four points ?

(ii) Write down their coordinates.

3. (a) Draw up a coordinate grid like the one in question 2 on squared paper, Make the horizontal and vertical axes both go up from 0 to 10.

   (b) Mark with a small neat cross the position of the following points :-

   A(1, 1), B(9, 1), C(9, 6), D(5, 10), E(1, 6).

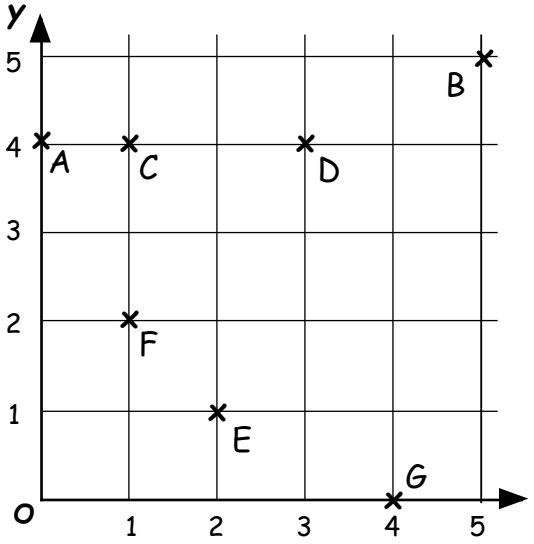
   (c) Join point A to point B; point B to point C; point C to point D; point D to point E, point E back to point A.

   (d) What shape have you formed ?

4. (a) Draw a new grid (from 0 to 10 in each axis).
   (b) Mark with a dot the following points and join them up in order.
   G(2, 1) H(4, 1) I(4, 4) J(6, 4) K(6, 5) L(4, 5) M(4, 7) P(8, 7) Q(8, 9) R(2, 9) G(2, 1).
   (c) When the points are joined, what letter of the alphabet is formed ?

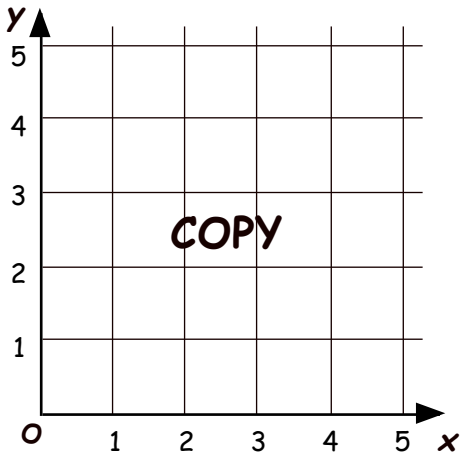
Exercise 2

1. Look at the coordinate grid.



   (a) Which point has an *x*-coordinate of 2 ?
   (b) Which point has a *y*-coordinate of 5 ?
   (c) What is the *x*-coordinate of D ?
   (d) What is the *y*-coordinate of F ?
   (e) Which point has its *x*-coordinate the same as its *y*-coordinate ?
   (f) Which point lies on the *x*-axis ?
   (g) Which point lies on the *y*-axis ?
   (h) Which 3 points have the same *y*-coordinate ?
   Write down their coordinates.
   (i) Which 2 points have the same *x*-coordinate ?
   Write down their coordinates.
   (j) From G to E is "2 LEFT and 1 UP".
   Give instructions in the same way which will take :-
   (i) D onto B (ii) E onto C.

2. Draw a 5 by 5 coordinate grid as shown.



   (a) Plot the points P(2,3), Q(3,1) and R(4,3).
   (b) S is a point to be put on the grid so that figure PQRS is a rhombus (diamond). On your diagram plot the point S and write down its coordinates.
   (c) Join P to R and join Q to S. You now have the two diagonals of the rhombus.
   Write down the coordinates of the point X where the two diagonals meet.

3. Draw a **10 by 10** coordinate grid.

   (a) Mark with a dot the following points and join them up in order.

   A(5, 1) B(2, 2) C(2, 4) D(3, 6) E(5, 7) F(7, 6) G(8, 4) H(7, 2) back to A.

   (b) When the points are joined, what is the name of the shape you have formed ?

Exercise 3 (Two more for fun)

Plot the following points in order and join them up as you move from one point to the next.

1. **An Alien Mask**

   The *x* axis should go from 0 to 20. The *y* axis should go from 0 to 30.

   Face

   (8,4) (11,4) (17,16) (17,20) (16,23) (15,25)
   (14,26) (12,27) (7,27) (5,26) (4,25) (3,23)
   (2,20) (2,16) (2,4)

   Left Eye

   (4,19) (6,19) (8,17) (9,14) (9,13) (8,13) (6,14) (4,19)

   Right Eye

   (15,19) (13,19) (11,17) (10,14) (10,13) (11,13)
   (13,14) (15,19)

   Left Nose

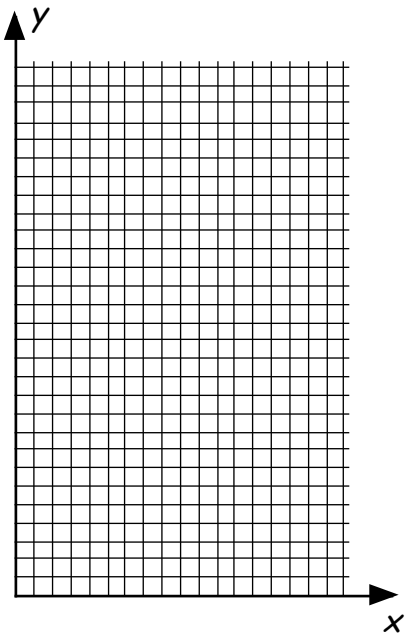
   (8,10) (9,10) (9,9)

   Right Nose

   (10,10) (11,10) (10,9)

   Mouth

   (8,7) (11,7)



2. **A Diplodocus**

   The *x* axis should go from 0 to 25. The *y* axis should go from 0 to 20.

   Plot these coordinates and join them up like dot to dot as you go.

   (24,18) (24,17) (22,16) (20,11) (19,6) (19,2) (17,2) (17,6) (16,5) (15,2)
   (13,2) (14,5) (14,6) (11,6) (9,2) (7,2) (9,6) (7,6) (4,4) (2,3) (0,2) (1,3)
   (3,5) (5,9) (9,11) (17,11) (21,17) (23,18) (24,18)
   Back Leg (12,6) (12,2) (10,2) (10,4)