International Indian School, Riyadh
## Worksheet - VIII
Mathematics, SA - 2 , 2014 - 2015

1. Construct a quadrilateral ABCD in which AB = 4.5 cm, BC = 6 cm, CD = 5.6 cm, DA = 7.8 cm and diagonal AC = 9 cm.

2. Construct a quadrilateral ABCD in which AB = 4 cm, BC = 6 cm, CD = 5 cm, DA = 3.5 cm and diagonal AC = 7 cm.

3. Construct a quadrilateral ABCD in which AB = 8 cm, BC = 9 cm, CD = 5 cm, DA = 6.7 cm and diagonal BD = 7 cm.

4. Construct a quadrilateral PQRS in which PQ = 5 cm, QR = 5.5 cm, RS = 6 cm, SP = 8.9 cm and ∠P = 60°.

5. Construct a quadrilateral ABCD in which AB = 7 cm, BC = 4.1 cm, AD = 6.3 cm, diagonal AC = 8.9 cm and diagonal BD = 8.7 cm.

6. Construct a quadrilateral ABCD in which AB = 6.5 cm, BC = 5.5 cm, DA = 3.8 cm, ∠A = 90° and ∠B = 70°.

7. Construct a quadrilateral ABCD with BC = 5.5 cm, CD = 4 cm, DA = 4 cm, ∠C = 90° and ∠D = 85°.

8. Construct a quadrilateral PQRS in which PQ = 4.5 cm, QR = 7.5 cm, ∠P = 100°, ∠Q = 85° and ∠R = 75°.

9. Construct a quadrilateral PQRS in which the sides are PQ = 5 cm, QR = 8.3 cm, RS = 6.4 cm, SP = 9 cm and ∠S = 90°.

10. Construct a quadrilateral LMNO in which LM = 5 cm, MN = 6.5 cm, ∠L = 75°, ∠M = 105° and ∠N = 120°.

11. Construct a quadrilateral ABCD in which AB = 4.1 cm, BC = 3.8 cm, ∠A = 60°, ∠C = 82° and ∠B = 125°.

12. Construct a parallelogram, one of whose sides is 5.5 cm and whose diagonals are 5.8 cm and 7 cm.

13. Construct a parallelogram, one of whose sides is 6 cm and whose diagonals are 6 cm and 8 cm.

14. Construct a parallelogram ABCD in which AB = 4.5 cm, BC = 4 cm and diagonal AC = 6.2 cm.

15. Construct a parallelogram ABCD in which AB = 6.5 cm, AD = 3 cm and diagonal BD = 4.9 cm.

16. Construct a parallelogram OKAY in which OK = 5cm; KA = 6cm and ∠Y=50°.

17. Construct a rectangle ABCD whose sides are 6 cm and 3 cm.

18. Construct a parallelogram PQRS in which QR = 4 cm, PQ = 5.5 cm and ∠Q = 78°.

19. Construct a parallelogram whose diagonals are 4.4 cm and 7.4 cm, and an angle between them is 75°.

20. Construct a rectangle ABCD whose one side is 4 cm and diagonal is 5 cm.

21. Construct a parallelogram ABCD in which BC = 3.5 cm, ∠C = 80° and CD = 4 cm.

22. Construct a rectangle ABCD whose one side is 3.5 cm and diagonal is 6 cm.

23. Construct a rectangle ABCD whose sides are 4 cm and 2 cm.

24. Construct a square, each of whose sides measures 4.4 cm.

25. Construct a square, each of whose diagonals measures 6.4 cm.

26. Construct a rhombus whose diagonals are 5 cm and 6 cm.

27. Construct a rhombus with side 6.4 cm and one of whose angles is equal to 70°.

Chap. 15. INTRODUCTION TO GRAPH

Exercise 15.1

1. Find the coordinates of the points P, Q, R, S, T, L and M from the following graph.
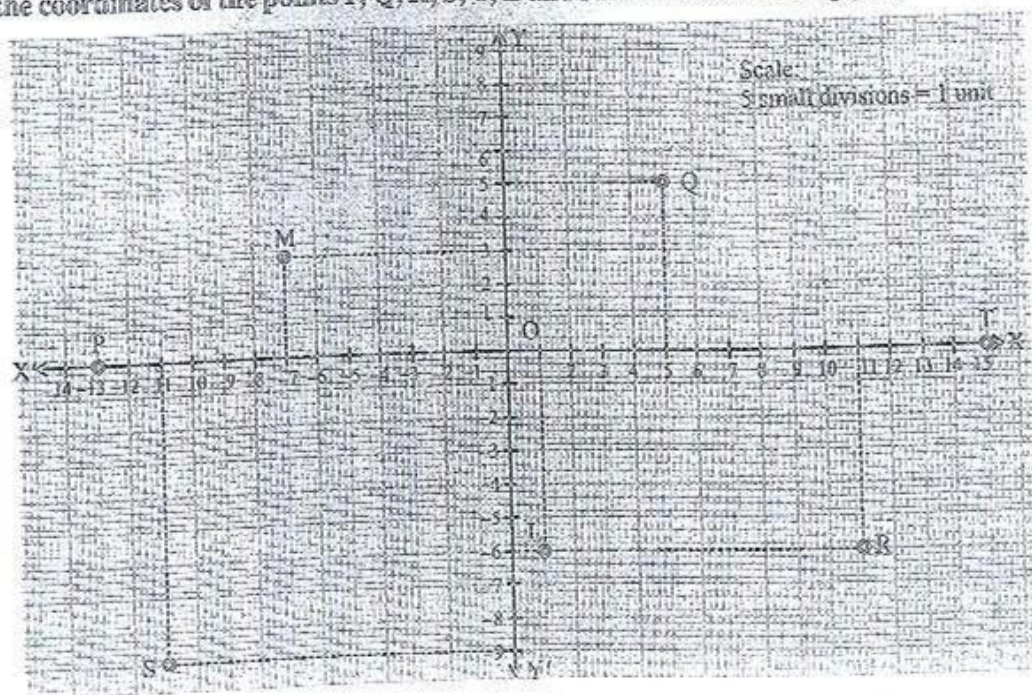
2. Plot the following points on graph and name the quadrant/axis.

   (i) A(–3, 7)
   (ii) B(–2, –5)
   (iii) C(3, –4)
   (iv) D(–9, 0)
   (v) E(–7, –7)
   (vi) F(6, –3)
   (vii) G(0, –3)
   (viii) H(4, 0)
   (ix) I(–4, 3)
   (x) J(6, 5)

3. Without plotting on the graph, name the quadrant/axis of the following coordinates.

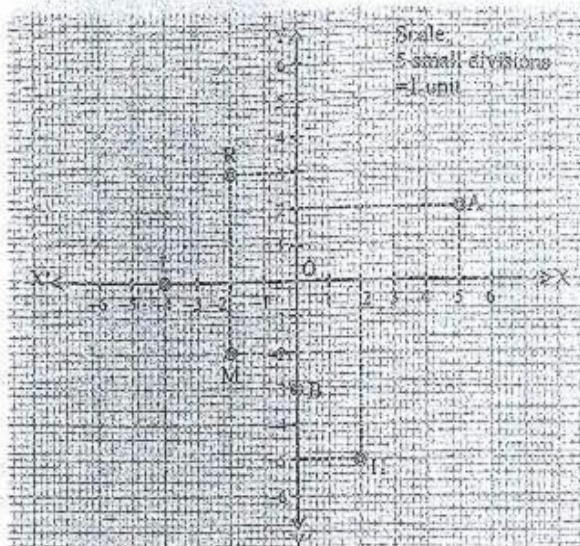   (i) G(–3, –10)
   (ii) L(7, –5)
   (iii) R(3, 0)
   (iv) S(4, 2)
   (v) T(–8, 4)
   (vi) Z(0, –11)

Find the coordinates of the following points from the given graph. Also, name the quadrant in which they lie.

Scale;
5 small divisions = 1 unit

5. Using the following data of the temperature at 12 o'clock during a certain week. Plot the graph between temperature versus day.

Day	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Temp. (in °C)	35°C	34°C	37°C	39°C	42°C	36°C	40°C

6. Draw the graph between side of a cube and volume of a cube.

Side in cm	2	3	4	5
Vol in cm³	8	27	64	125

7. Plot the graph of 7 and its multiples.

Is it a linear graph.

1. The growth of a plant was recorded as a graph shown below.
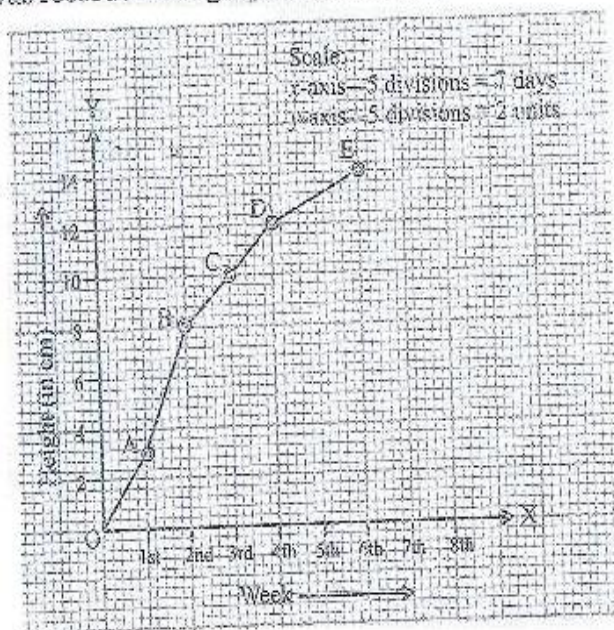
Read it carefully and find.

(i) At the end of which week(s) was the plant no more than 12 cm?

(ii) Between which two weeks was there the greatest increase in height?

(iii) How much did the plant grow from 3rd week to 4th week?

2. A distance-time table of a moving car is given below.

Time	10:20 a.m.	10:30 a.m.	10:40 a.m.	10:50 a.m.	11:00 a.m.	11:10 a.m.	11:20 a.m.
Distance (in km)	0	5	12	22	26	28	38

(i) Using graph paper, plot the graph of distance versus time.

(ii) When was the car travelling at the greatest speed?

(iii) What is the speed between 10:40 to 10:50 a.m.?

(iv) What is the average speed of the car?

[Hint: Average speed = Total distance travelled/ total time taken.]

3. Read the following distance-time graph of a car and find.

(i) Distance travelled from C to E.

(ii) Speed of the car between 20 – 40 seconds.

(iii) When is the speed of the car zero?
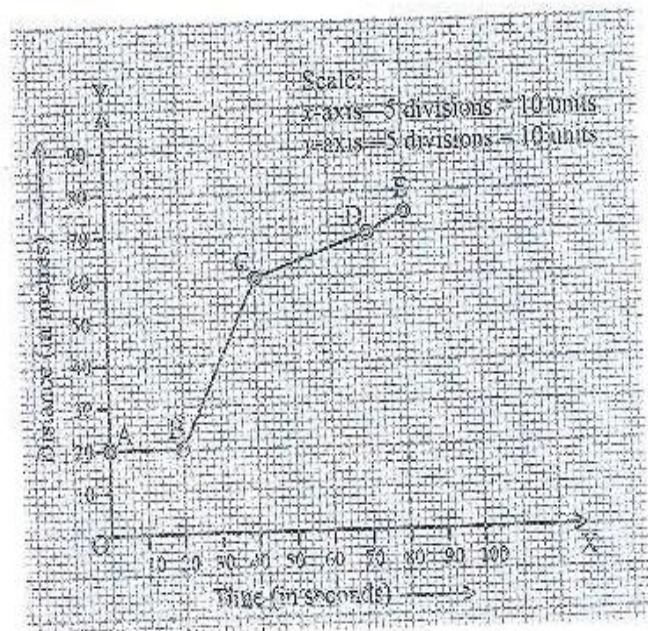
I. Multiple Choice Questions.

1. The x-coordinate of an ordered pair is called:

   (i) ordinate   (ii) abscissa   (iii) intercept   (iv) origin

2. A linear function is denoted by:

   (i) $x = y + 2$ (ii) $2 = b - a$ (iii) $a = cx + yb$ (iv) $y = mx + c$

3. The coordinate P(3, 0) lies on:

   (i) origin   (ii) x-axis   (iii) y-axis   (iv) none of these

4. The coordinate (–2, 3) lies in:

   (i) 1st quadrant   (ii) 3rd quadrant   (iii) 2nd quadrant   (iv) 4th quadrant

5. The Cartesian plane has:

   (i) 2 quadrants   (ii) 3 quadrants   (iii) 4 quadrants   (iv) 5 quadrants

II. Fill in the blanks.

6. The signs of a coordinate in 2nd quadrant are _____.

7. The ordered pair of origin 'O' is written as _____.

8. The coordinate T(–3, –5) lies in _____ quadrant.

9. The horizontal axis of a Cartesian plane is called _____.

10. The coordinate L(0, –7) lies in/on _____.

III. Tick (✓) for 'True' and (✗) for 'False'.

11. The origin of the axes system lies in 1st quadrant.

12. The linear graphs are represented as lines.

13. The quadrants of the Cartesian plane are named in clockwise direction.

14. The vertical axis of the Cartesian plane is denoted as YOY'.

15. In P(x, y), y is the abscissa.