

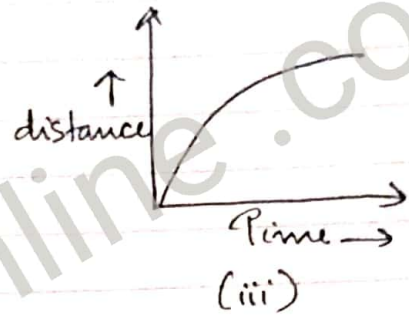
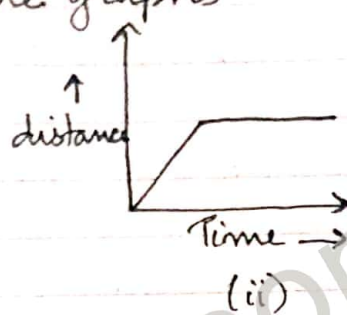
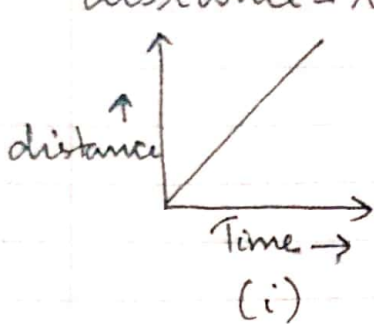
VIII H.W-10 (Introduction To graphs)

1) Complete the given tables and draw a graph for each.

(i)	x	0	1	2	3
	$y = 3x + 1$	1	4	—	—

(ii)	x	1	2	4	6
	$y = x - 1$	0	—	—	—

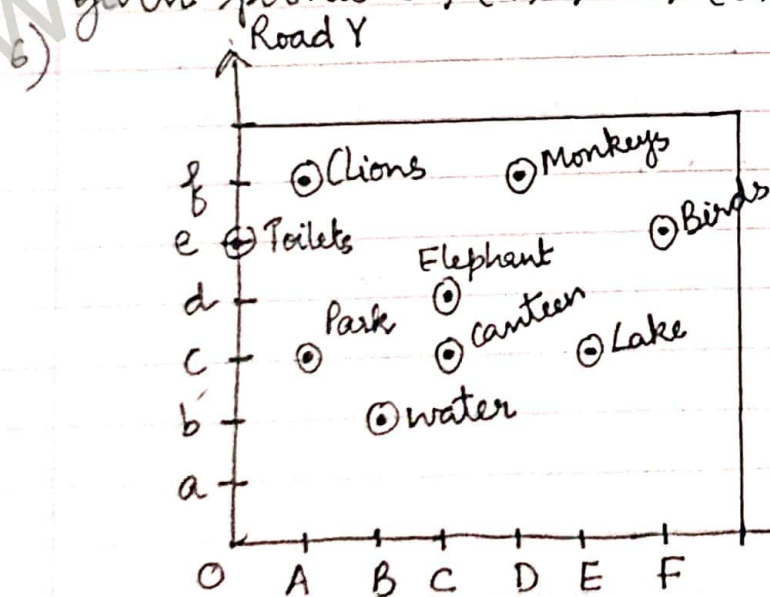
2) Explain the situations represented by the following distance - time graphs



3) If y -coordinate is 3 times x -coordinates, form a table for it and draw a graph. Is it a linear graph?

4) Write the y -coordinate (ordinate) of each of the given points. (a) (3,5) (b) (4,0) (c) (2,7)

5) Write the x -coordinate (abscissa) of each of the given points (a) (7,3) (b) (5,7) (c) (0,5)



Study the given map of a zoo and answer the following
 (a) Give the location of lions in the zoo
 (b) (D,f) and (C,d) represent locations of which animals in the zoo?

(d) Give the location of canteen.

(c) where are the toilets located?

7) Match the following:-

Column A

- (a) (7,0)
- (b) (11,11)
- (c) (4,8)
- (d) (6,2)
- (e) (0,9)
- (f) (6,3)

Column B

- (i) the ordinate is double the abscissa
- (ii) the ordinate is zero
- (iii) the ordinate is equal to the abscissa
- (iv) the abscissa is double the ordinate
- (v) the abscissa is triple the ordinate
- (vi) the abscissa is zero.

8) Match the following:-

Column A

- (i) (0,5)
- (ii) (2,3)
- (iii) (4,8)
- (iv) (3,7)
- (v) (0,0)
- (vi) (5,0)

Column B

- (a) y coordinate is $(2 \times x\text{-coordinate}) + 1$
- (b) coordinates of origin
- (c) only y-coordinate is zero
- (d) the distance from x-axis is 5
- (e) y coordinate is double of x-coordinate
- (f) the distance from y-axis is 2

9) True/False? (Justify your answer)

- 1) A line graph can also be a whole unbroken lines
- 2) The distance of any point from the x-axis is called the x-axis coordinate.
- 3) The distance of the point (3,5) from the y-axis is 5
- 4) The ordinate of a point is its distance from the y-axis
- 5) In the point (2,3), 3 denotes the y-coordinate
- 6) The points (3,5) and (5,3) represent the same point.
- 7) The y-coordinate of any point lying on the x-axis will be zero.

10) Fill ups

- 10) _____ displays data that changes continuously over periods of time.
- 11) The relation between dependent and independent variables is shown through a _____
- 12) We need _____ coordinates for representing a point on the graph sheet.

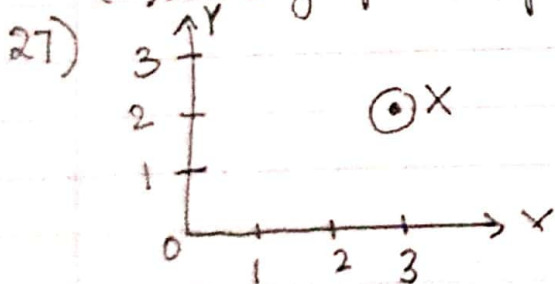
- 13) A point in which the x -coordinate is zero and y -coordinate is non zero will lie on the _____
- 14) The horizontal and vertical line in a graph are usually called _____ and _____
- 15) The process of fixing a point with the help of the coordinates is known as _____ of the point
- 16) The distance of any point from the y -axis is the _____ coordinate
- 17) All points with y -coordinate as zero lie on the _____
- 18) For the point $(5, 2)$, the distance from the x -axis is _____ units.
- 19) The x -coordinate of any point lying on the y -axis will be _____
- 20) The y -coordinate of the point $(2, 4)$ is _____
- 21) In the point $(4, 7)$, 4 denotes the _____
- 22) A point has 5 as its x -coordinate and 4 as its y -coordinate. Then the coordinates of the point are _____
- 23) In the coordinates of a point, the second number denotes the _____

24) The point where the two axes intersect is called the _____

MCA 25) The comparison of parts of a whole may be done by a (a) bar graph (b) pie chart (c) linear graph (d) line graph.

26) A graph that displays data that changes continuously over period of time is _____

(a) bar graph (b) pie chart (c) histogram (d) line graph



The coordinates of point X are
 (a) $(0, 2)$ (b) $(2, 3)$
 (c) $(3, 2)$ (d) $(3, 0)$

28) The point $(3, 4)$ is at a distance of _____
 (a) 3 from both the axis (b) 4 from both the axis

(c) 4 from x-axis and 3 from y-axis

(d) 3 from x-axis and 4 from y-axis.

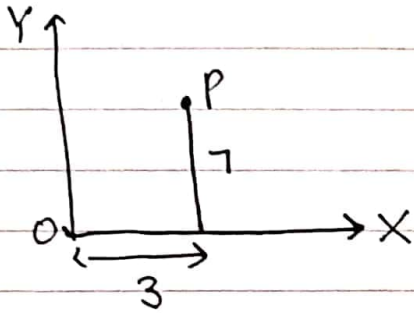
29) A point which lies on both the axis is —

(a) (0,0) (b) (0,1) (c) (1,0) (d) (1,1)

30) The coordinates of a point at a distance of 3 units from the x-axis and 6 units from the y-axis is —

(a) (0,3) (b) (6,0) (c) (3,6) (d) (6,3)

31)

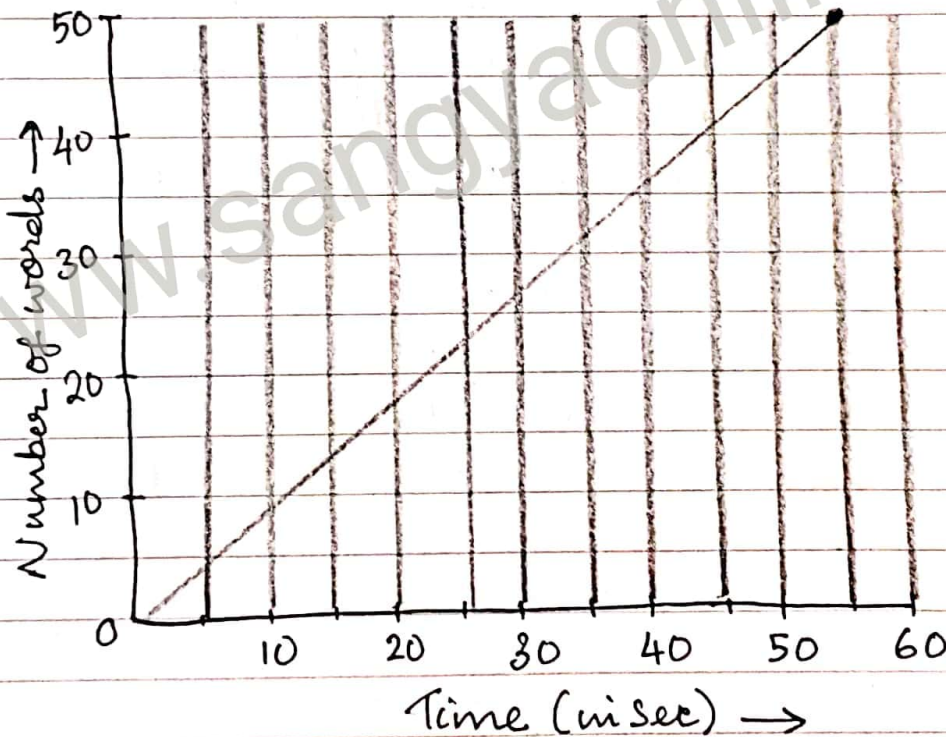


The position of the point P

(a) (7,3) (b) (3,7)

(c) (3,3) (d) (7,7)

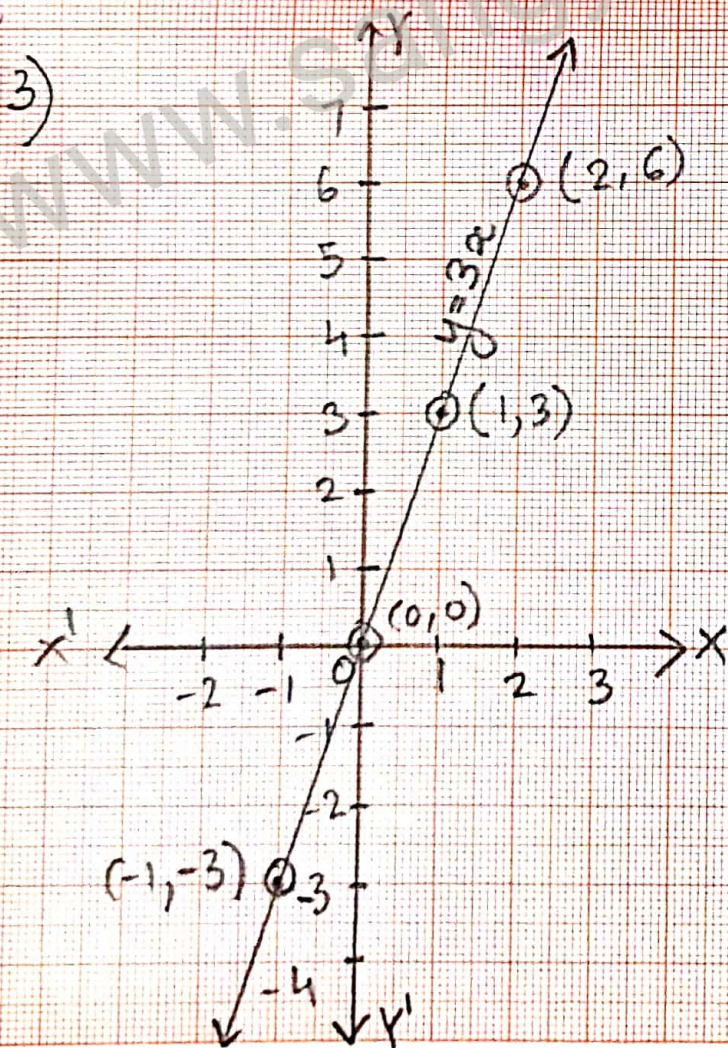
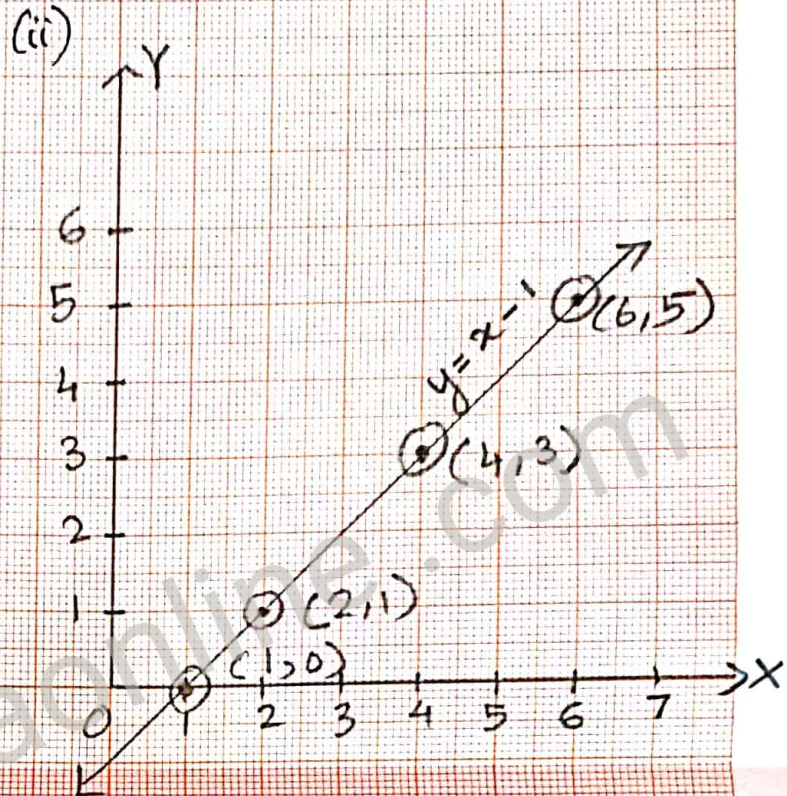
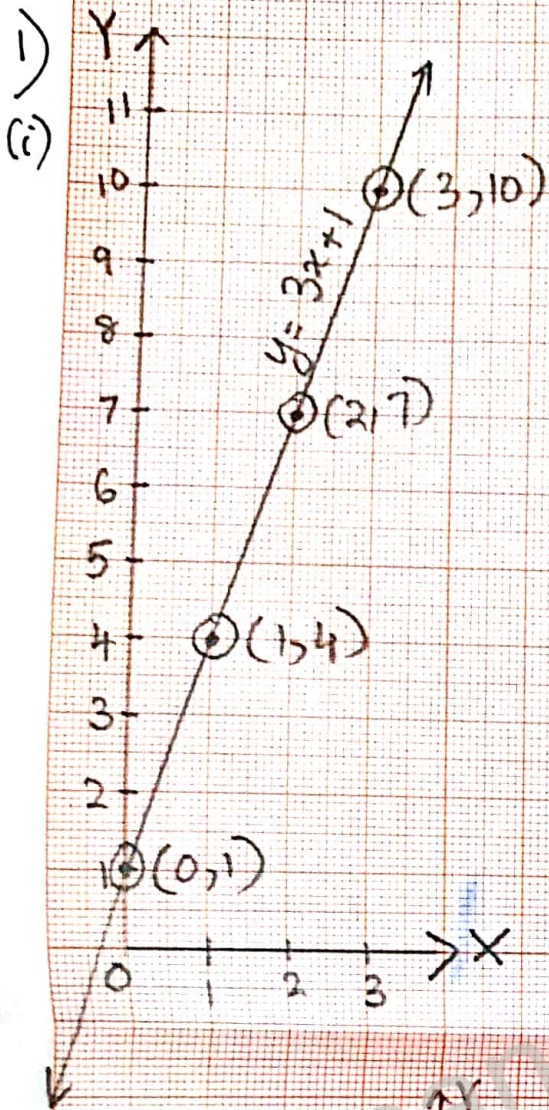
32)



Data was collected on a student's typing rate and graph was drawn as shown below.

Approximately how many words has this student typed in 30 sec

(a) 20 (b) 24 (c) 28 (d) 34



VIII Homework -10 (Answers)

1) (i) when $x = 2$, $y = 3 \times 2 + 1$
 $= 6 + 1 = 7$

when $x = 3$, $y = 3 \times 3 + 1$
 $= 9 + 1 = 10$

x	0	1	2	3
y	1	4	7	10

(graph)

(ii) when $x = 2$, $y = 2 - 1 = 1$

when $x = 4$, $y = 4 - 1 = 3$

when $x = 6$, $y = 6 - 1 = 5$

x	1	2	4	6
y	0	1	3	5

(graph)

2) (i) distance changes in equal intervals of time (increases)

(ii) initially distance was changing steadily, after a certain period of time the body comes to rest position.

(iii) distance ~~is~~ increases in unequal intervals of time.

3) Since the y -coordinate is 3 times x -coordinate, then $y = 3x$.

when $x = 1$, $y = 3 \times 1 = 3$

when $x = 2$, $y = 3 \times 2 = 6$

when $x = 0$, $y = 3 \times 0 = 0$

when $x = -1$, $y = 3 \times -1 = -3$

x	1	2	0	-1
y	3	6	0	-3

(graph) Yes, it is a linear graph.

4)

points	<u>y-coordinate / ordinate</u>
(3, 5)	5
(4, 0)	0
(2, 7)	7

Points	x coordinates / abscissa
(7, 3)	7
(5, 7)	5
(0, 5)	0

- 6) (a) Location of lions is (A, f)
 (b) (D, f) represents the location of Monkeys and
 (c, d) represents the location of Elephants
 (c) Toilets are located at (0, e)
 (d) Canteen is located at (C, c)

7)

- | | | |
|--------------|---|--|
| (a) (7, 0) | → | (ii) the ordinate is zero |
| (b) (11, 11) | → | (iii) the ordinate is equal to abscissa |
| (c) (4, 8) | → | (i) the ordinate is double the abscissa |
| (d) (6, 2) | → | (v) the abscissa is triple the ordinate |
| (e) (0, 9) | → | (iv) the abscissa is zero |
| (f) (6, 3) | → | (vi) the abscissa is double the ordinate |

- | | | |
|--------------|---|---|
| (i) (0, 5) | → | (d) the distance from x-axis is 5 |
| (ii) (2, 3) | → | (f) the distance from y-axis is 2 |
| (iii) (4, 8) | → | (e) y coordinate is double of x coordinate |
| (iv) (3, 7) | → | (a) y coordinate is $2 \times x \text{ coordinate} + 1$ |
| (v) (0, 0) | → | (b) coordinates of origin |
| (vi) (5, 0) | → | (c) only y-coordinate is zero. |

- 9) (1) True, a line graph can also be a whole unbroken line.
 (2) False, the distance of any point from x-axis is called the y-coordinate
 (3) False, the distance of the point (3, 5) from the y-axis is its x coordinate i.e., 3
 (4) False, the ordinate of a point is its distance from the x-axis.
 (5) True, 3 denotes the y-coordinate in (2, 3)
 (6) False, (3, 5) and (5, 3) represent different points
 (7) True, y-coordinate is zero for any point on x-axis

- 10) Line graph
 - 11) graph
 - 12) two
 - 13) y-axis
 - 14) x-axis and y-axis
 - 15) plotting
 - 16) x
 - 17) x-axis
 - 18) 2
 - 19) zero
 - 20) 4
 - 21) x coordinate or abscissa
 - 22) (5, 4)
 - 23) y-coordinate or ordinate
 - 24) origin (0, 0)
 - 25) pie chart (b)
 - 26) line graph (d)
 - 27) (3, 2) (c)
 - 28) 4 from x-axis and 3 from y-axis (c)
 - 29) (0, 6) (a)
 - 30) (6, 3) (a)
 - 31) (3, 7) (b)
 - 32) Approximately 28 words in 30 seconds (c)
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