

Chapter 02 THE STRAIGHT LINE

1) The set $\{x \mid a < x < b\}$ can also written as

- A) $[a, b]$
- B) (a, b)
- C) $[a, b)$
- D) $(a, b]$

Answer: B

2) The set $\{x \mid a \leq x \leq b\}$ is called

- A) Interval
- B) Open Interval
- C) Half Open interval
- D) Closed interval

Answer: D

3) The distance between the points $(0, 0)$ and $(0, 2)$ is

- A) 4
- B) 2
- C) $\sqrt{2}$
- D) 0

Answer: B

4) If $P_1(X_1, Y_1)$ and $P_2(X_2, Y_2)$ are two points such that $\overline{P_1P_2}$ is parallel to x - axis, then

- A) $x_2 = x_1$
- B) $x_2 = y_1$
- C) $y_2 = y_1$
- D) $y_2 = x_2$

Answer: C

5) If $O(0, 0)$, $A(4, 6)$ are two points then the co-ordinates of the mid point \overline{OA} are

- A) $(4, 3)$
- B) $(2, 3)$
- C) $4, 6)$
- D) $(2, 6)$

Answer: B

6) The distance of any point $P(x, y)$ from the origin is

- A) x
- B) y
- C) $x^2 + y^2$
- D) $\sqrt{x^2 + y^2}$

Answer: D

7) If point P divides a line segment $\overline{P_1P_2}$ internally then the ratio is

- A) Positive
- B) Negative
- C) $1 : 2$
- D) $1 : 3$

Answer: A

8) The points $(-2, 0)$, $(-1, 0)$, $(1, 0)$ and $(2, 0)$ lie on

- A) y - axis
- B) x - axis
- C) $y = -x$
- D) $y = 5x$

Answer: B

9) If $A(0, 0)$, $B(3, 0)$ and $C(0, 3)$ are the vertices of a triangle then co-ordinates of its centroid is

- A) $(1, 1)$
- B) $(0, 1)$
- C) $(3, 3)$
- D) $(\frac{3}{2}, \frac{3}{2})$

Answer: A

10) The points $(2, 2)$, $(3, 3)$ and $(5, 5)$ lie on a line defined by the equation

- A) $x + y = 0$
- B) $y = 2x$
- C) $y = 3x$
- D) $x - y = 0$

Answer: D

11) The points $(1, -1)$, $(2, -2)$, $(4, -4)$ are

- A) collinear
- B) non collinear
- C) on three lines
- D) vertices of a triangle

Answer: A

12) The points $(0, 0)$, $(1, 0)$ and $(0, 2)$ are the vertices of

- A) Right triangle
- B) Isosceles Triangle
- C) Equilateral triangle
- D) Oblique triangle

Answer: A

13) If the points $A(x_1, y_1)$, $B(x_2, y_2)$ and $C(x_3, y_3)$ are collinear, then area of triangle ABC is

- A) 0
- B) 1
- C) 2
- D) 3

Answer: A

14) If two medians of a triangle intersect at a point $(2, 2)$ then 3rd median will pass through the point

- A) $(0, 1)$
- B) $(3, 3)$
- C) $(1, 1)$
- D) $(2, 2)$

Answer: D

15) If two internal angle bisectors of a triangle pass through the origin then the 3rd angle bisector will pass through the point

- A) (3, 0)
- B) (0, 3)
- C) (0, 0)
- D) (3, 3)

Answer: C

16) In inclination of a straight line is 45° then its slope is equal to

- A) 0
- B) 1
- C) -1
- D) ∞

Answer: B

17) If slope of a line is 2 then slope of the line perpendicular to this line is equal to

- A) -2
- B) $-\frac{1}{2}$
- C) 2
- D) 0

Answer: B

18) If a line is parallel to y-axis then slope of the line perpendicular to this line is

- A) ∞
- B) 0
- C) 1
- D) -1

Answer: B

19) The inclination of the line defined by the equation $y = -x$ is

- A) $-\frac{\pi}{3}$
- B) $-\frac{\pi}{2}$
- C) $\frac{3\pi}{4}$
- D) $\frac{\pi}{4}$

Answer: C

20) If the inclination of a line is $\frac{\pi}{4}$ then equation of that line is

- A) $x - y = 0$
- B) $x + y = 0$
- C) $2x - y = 1$
- D) $x + y = 1$

Answer: A

21) If one of the angles between two intersecting lines is 122° then the acute angle between these lines is of measure

- A) 98°
- B) 68°
- C) 58°
- D) 22°

Answer: C