

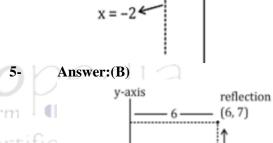


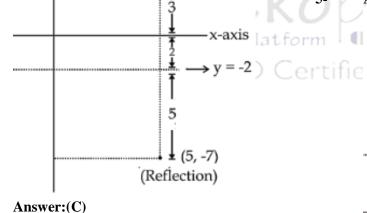
Coordinate Geometry Solution

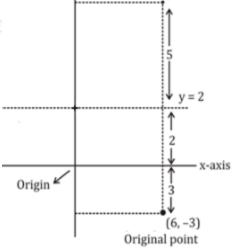
- 1-Answer:(B) y-axis → x-axis (2, -3.5)(-2, -3.5)(Reflection) (Original Point)
- Answer:(C) y-axis (original point) (-4, 3)(0, 3)Reflection

x-axis

2-Answer:(D) y axis (original point) • (5, 3)







(Reflections) (5, 0)Origin_k – x -axix **y** = −1

y-axis

3-

6 -Answer:(D)



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Let vertex of C be (x, y)

$$\therefore \frac{3+0+x}{3} = 1 \Rightarrow x = 0$$
and
$$\frac{-4+5+y}{3} = -4 \Rightarrow y = -13$$

7. Answer:(B)

Coordinates of centroid of triangle
$$= \frac{x_1 + x_2 + x_3}{3} \frac{y_1 + y_2 + y_3}{3}$$

$$= \frac{1 - 4 + 3}{3}, \frac{-5 + 0 - 4}{3}$$

$$= (0, -3)$$

Answer: (B) 8 -

	K:1	
S	T	U
(5,1)	(x,0)	(-1,-2)

We know,

$$0 = \frac{1 \times 1 - 2k}{k+1} \rightarrow k = \frac{1}{2}$$

∴ Required ratio = 1:2

A power: (C)

mock test platform | and

9 -

A	P	В
(x,y)	(3,1)	(5,-4)

We know.

$$\frac{y-4}{2} = 1 \Rightarrow y = 6$$
And,
$$\frac{x+5}{2} = 3 \Rightarrow x = 1$$

: A(1, 6) is the required coordina

10 -Answer: (D)

$$A(2, 1)$$

$$B \qquad 2 \qquad 3 \qquad C$$

$$2 \stackrel{?}{\times} y - 3 \times 3 \qquad = 1$$

$$\Rightarrow 2y - 9 = 5$$

$$\Rightarrow y = 7$$

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11 -Answer: (A)

Centroid =
$$\left(\frac{x_1 + x_2 + x_3}{3}, \frac{y_1 + y_2 + y_3}{3}\right)$$

= $\left(\frac{1+4+(-2)}{3}, \frac{-5+0+2}{3}\right)$
= $(1, -1)$

12 -Answer: (B)

	k <u>:</u> 1	
(2,3)	(0,y)	(-2,1)

By section formula,

$$\frac{-2k+2}{k+1} = 0$$
$$-2k+2 = 0$$
$$k = 1$$

 \therefore ratio = 1 : 1

13 -Answer:(A) We know,

Centroid of triangle =
$$\left(\frac{x_1 + x_2 + x_3}{3}, \frac{y_1 + y_2 + y_3}{3}\right)$$

 $(2, 2) = \left(\frac{7 + 1 + x}{3}, \frac{-1 + 2 + y}{3}\right)$
 $\therefore \frac{7 + 1 + x}{3} = 2 \Rightarrow x = -2$

Certifie $\frac{-1+2+y}{3} = 2 \Rightarrow y = 5$

14 -Answer: (A)

A	P	В
(-5,y)	(-2,5)	(x,3)
Now, ATQ,		
$-2 = \frac{-5 + 2}{2}$	· x	
⇒ -4 = -5 +	+x	
\Rightarrow x = 1		

15 -Answer: (B)



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We know

Distance b/w two points =
$$\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

 $\Rightarrow 13 = \sqrt{(k-2)^2 + (-5-7)^2}$
 $\Rightarrow 169 = k^2 + 4 - 4k + 144$
 $\Rightarrow k^2 - 4k - 21 = 0$
 $\Rightarrow k^2 - 7k + 3k - 21 = 0$
 $\Rightarrow k(k-7) + 3(k-7) = 0$

16 - **Answer: (B)**

By section formula,

Point A =
$$\left(\frac{4 \times \frac{7}{2} + 1 \times 6}{4 + 1}, \frac{4 \times 6 + 1 \times 1}{4 + 1}\right)$$

= $(4, 5)$

17- Answer:(**B**)

A	P	В
(2,-4)	(5,-1)	(x,y)

∵ P is a mid-point

$$\therefore \frac{x+2}{2} = 5 \text{ and } \frac{y-4}{2} = -1 \text{ test platform}$$

x = 8 and y = 2

$$\therefore B(x, y) = (8, 2)$$

18- Answer:(B)

Distance between points =

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$$\sqrt{(-2-3)^2 + (-6-6)^2} = 13$$

19- **Answer:(A)**

Let the ratio be K:1

By section formula

$$\frac{4K+1\times(-1)}{K+1}=0$$

$$4K=1$$

$$K=\frac{1}{-}$$

: The required ratio is 1:4

20- Answer:(D)

