

FOUNDATION⁺

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Class: VIII. MATHEMATICS

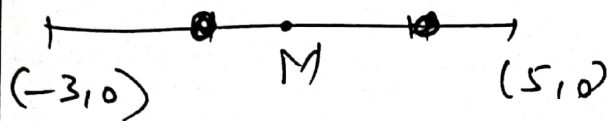
4. CARTESIAN PLANE

TEACHING TASK (SEE MAINS)

01. $(-x, y) \in Q_2 \Rightarrow x > 0, y > 0$

Ans: A

02



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

only possible answer (0, 0)

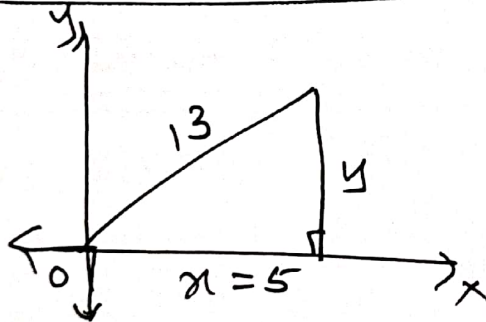
Ans: C

03

$A(1, 2) \in Q_1, B(7, 8) \in Q_1$
Its mid-point also lies in Q_1 ,

Ans: A

04



We have

$$x^2 + y^2 = 13^2$$

$$5^2 + y^2 = 13^2$$

$$\Rightarrow y^2 = 169 - 25 = 144$$

$$\therefore y = \pm 12$$

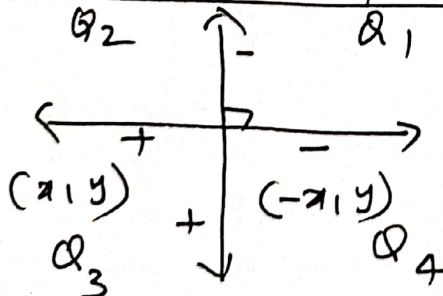
Ans: A

05

$$(m, -n) \in Q_4 \Rightarrow m > 0, n > 0$$

Ans: B

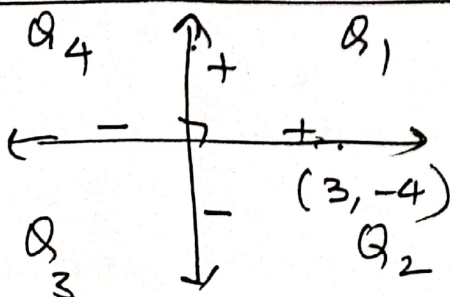
06.



$$(-x, y) \in Q_4$$

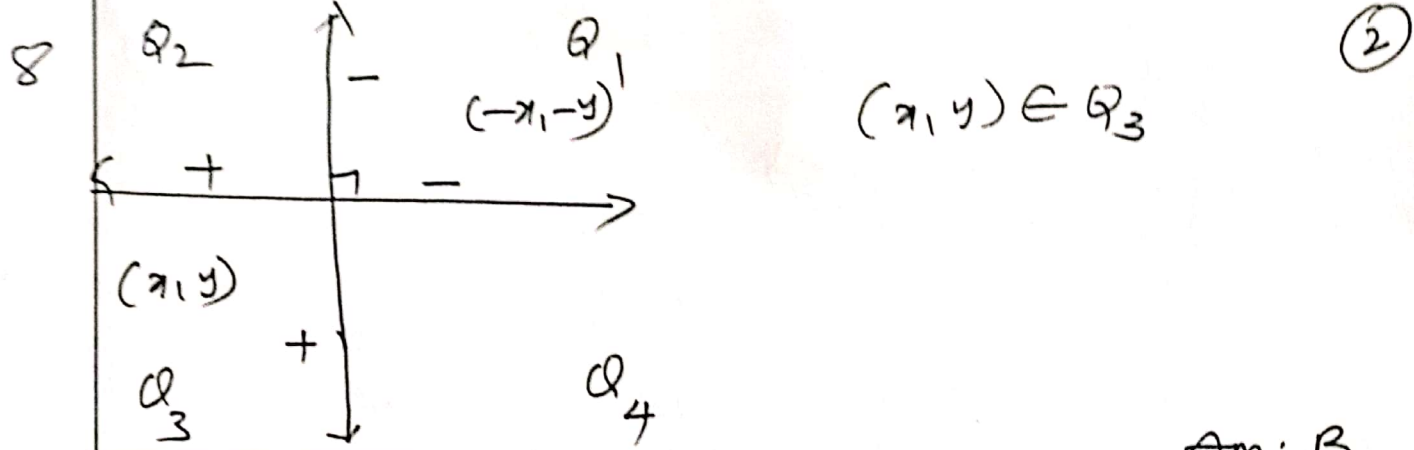
Ans: C

07



$$(3, -4) \in Q_4$$

Ans: B



Ans: B

09. Conceptual

Ans: D

10. $(1, 2) \in Q_1$, $(-2, -3) \in Q_3$, $(2, -3) \in Q_4$

Ans: B

JEE ADVANCED

11. $(3, 0), (0, 0) \in X\text{-axis}$

Ans: A, C

12. $(0, 0), (0, y), (0, 3) \in Y\text{-axis}$

Ans: A, C, D

13. Statement I: Conceptual (True)

Statement II: Conceptual (True)

Ans: A

14. Statement I: Conceptual (True)

Statement II: Conceptual (True)

Ans: A

15. Assertion: Conceptual (True)

Reason: Conceptual (True)

Ans: A

16. Assertion: Distance from $Y\text{-axis} = |8| = 8$ (~~True~~)

Reason: Conceptual (True)

(False)
Ans: D

17. $x < 0 \Rightarrow -x > 0 \Rightarrow (-x, y) \in Q_1$

Ans: A

18. $x < 0 \Rightarrow -x > 0$, $y < 0 \Rightarrow -y > 0$

$\therefore (-x, -y) \in Q_1$

Ans: A

19. Conceptual

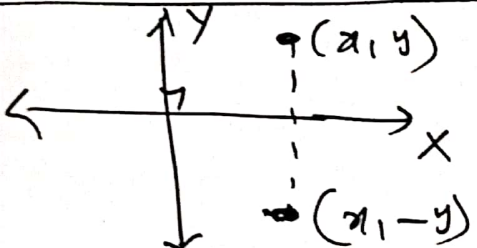
Ans: C

20. $(0, 0), (0, 3), (4, 0)$

Ans:
A, B, C

21.	Distance = $ 4 - 2 = 2 = 2$	(3) Ans: 2
22	Distance = $ 4 - (-4) = 4 + 4 = 8$	Ans: 8
23	a) $Q_1(t)$ c) $Q_3(r)$ b) $Q_2(s)$ d) $Q_4(q)$	Ans: t, s, r, q
24	a) $Q_2(v)$ c) $Q_3(x)$ b) $Q_1(p)$ d) $Q_4(s)$	Ans: v, p, r, s

LEARNERS TASK (CUES)

01.	Conceptual	Ans: C
02	 $x \rightarrow$ same $y \rightarrow$ Changes its sign	Ans: A
03	$x > 0, y < 0 \Rightarrow (x, y) \in Q_4$	Ans: D
04	$y = 0$	Ans: B
05	Conceptual	Ans: B
06	Distance = $ -3 = 3$	Ans: B
07.	Conceptual	Ans: C
08	Conceptual	Ans: B
09.	Conceptual	Ans: D
10	Conceptual	Ans: D

JEE MAINS LEVEL

01.	$(-3, -5) \in Q_3$	Ans: C
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02.	Distance = $ 3 - (-5) = 3 + 5 = 8 \text{ units}$	Ans: ⁽⁴⁾ B
03.	$(-4, 4) \in Q_2$	Ans: B
04.	$(\frac{4+6}{2}, 0) = (5, 0)$	Ans: D
05.	$(0, \frac{8+12}{2}) = (0, 10)$	Ans: B
06.	$(-, +) \in Q_2$	Ans: C
07.	$(-10, 0) \in \text{Negative X-axis}$	Ans: D
08.	Conceptual	Ans: B
09.	0	Ans: D
10.	Conceptual	

JEE ADVANCED

11.	$(x, y) \in Q_3 \Rightarrow x < 0, y < 0$	Ans: A, C
12.	$(-5, 3) \in Q_2, -5 < 0$	Ans: A, B
13.	Statement I: Conceptual (True) Statement II: Conceptual (True)	Ans: A
14.	Statement I: Conceptual (False) Statement II: Conceptual (True)	Ans: D
15.	Assertion: Conceptual (False) Reason: Conceptual (True)	Ans: D
16.	Assertion: Conceptual (False) Reason: Conceptual (True)	Ans: D
-17.	$(-x, -y) \in Q_3$	Ans: C
18.	$x+1=0 \Rightarrow x=-1, 2y+1=0 \Rightarrow y=-\frac{1}{2} \quad (-1, -\frac{1}{2}) \in Q_3$	Ans: C

19. Distance = $|-6| = 6$

(5) Ans. B

20. Distance = $|4| = 4$

Ans. A

21. $P = \left(\frac{3+7}{2}, 0\right) = (5, 0)$; $Q = \left(\frac{-2-6}{2}, 0\right) = (-4, 0)$
 $\therefore PQ = |5 - (-4)| = |5 + 4| = 9$

Ans. 9

22. Distance = $\sqrt{(-5)^2 + (-12)^2} = \sqrt{25 + 144} = \sqrt{169} = 13$

Ans. 13

23 a) $(3, 0)$ (r)

b) $(-3, 0)$ (t)

c) $(0, 3)$ (p)

d) $(0, -3)$ (q)

Ans. r, t, p, q

24 a) $(-5, 0)$ (r)

b) $(0, -9)$ (p)

c) $(0, 8)$ (s)

d) $(5, 0)$ (q)

Ans. r, p, s, q

$\Rightarrow$ THE END $\Leftarrow$