

7. BASIC GEOMETRICAL IDEAS

Class: VII, MATHEMATICS
INTEGRATED T. SOLUTIONS
(2023/24)

TEACHING TASK JEE MAINS LEVEL

01. Conceptual

Ans: B

02 $V + F = E + 2$

$$8 + 6 = E + 2 \Rightarrow E = 12$$

Ans: A

03 $QR = PR - PQ = 10 - 3 = 7 \text{ cm}$

Ans: B

04



$$4 \text{ parts} = 24 \text{ cm}$$

$$1 \text{ part} = 6 \text{ cm}$$

$$\therefore AB = 3 \times 6 = 18 \text{ cm}$$

$$AC = 7 \text{ parts}$$

$$= 7 \times 6$$

$$= 42 \text{ cm}$$

Ans: D

05 $4(4.5) - 2(6) = 18 - 18 = 6$

Ans: D

06 $AB = 42 \times \frac{3}{2} = 63 \text{ cm}$

$$BC = 42 \times \frac{2}{3} = 28 \text{ cm}$$

$$AB < BC$$

Ans: B

08 $CD = 2x + 5 = 13 \Rightarrow x = 4 \therefore CD = 2(4) + 5 = 13$ (2)
 $AD = 5x + 20 = 5(4) + 20 = 40$
 $AB = x + 10 = 4 + 10 = 14$
 $AB + CD + DA = 14 + 13 + 40 = 67$ Ans: A

08 Conceptual Ans: C

09 Conceptual Ans: A

10 $AB - CD = 4.6 - 3.8 = 0.8$ Ans: C

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11 Conceptual Ans: B, C

12 $2(6.5) - 3(3.5)$
 $= 13 - 10.5 = 2.5 \text{ cm (or)} \frac{5}{2} \text{ cm}$ Ans: C, D

13 Statement I: Conceptual (True)
Statement II: Conceptual (True) Ans: A

14 Statement I
 $n = 4$
 No. of line segment = $\frac{n(n-1)}{2} = \frac{4 \times 3}{2} = 6$ (True)
Statement II: Conceptual (True) Ans: A

(3)

$$15 \quad AB = 19.6 \times \frac{7}{4} = 34.3 \text{ cm}$$

$$BC = 37.9 - 12.4 = 25.5 \text{ cm}$$

$$CD = 30.1 + 4.6 = 34.7$$

$$DE = 2.7 \times 8 = 21.6 \text{ cm}$$

$$AB + BC = 34.3 + 25.5 = 59.8$$

$$DE + BC = 21.6 + 25.5 = 47.1$$

$$\therefore AB + BC > DE + BC$$

Ans. A

$$16 \quad X = AB + BC + CD - DE$$

$$= 34.3 + 25.5 + 34.7 - 21.6$$

$$= 72.9 \text{ cm}$$

Ans. A

$$17 \quad r = \frac{d}{2} = \frac{20}{2} = 10 \text{ cm}$$

Ans: 10

$$18 \quad 3(6) - 5 = 13$$

Ans = 13

$$19 \quad a) 8 (r)$$

$$b) 6 (s)$$

$$c) 12 (p)$$

$$d) 12 (q)$$

Ans: r, s, p, q

$$20 \quad a) \frac{1}{1000} \text{ mts (s)}$$

$$c) 10 \text{ mts (q)}$$

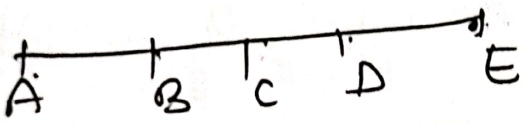
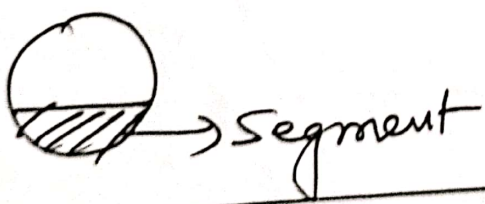
$$b) \frac{1}{10} \text{ mts (r)}$$

$$d) 1000 \text{ mts (t)}$$

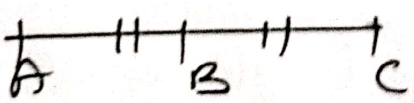
Ans: s, r, q, t

LEARNERS TASK (CUE'S)

(4)

01.	Conceptual	Ans: B
02.	Conceptual	Ans: A
03.	Conceptual	Ans: C
04.	Conceptual	Ans: A
05.	$6\text{cm} + 2(4) = 14\text{cm}$	Ans: D
06.	$AD > CD$	Ans: B
07.	 A, B, C, D, E are collinear No. of line segments = $\frac{5 \times 4}{2} = 10$	Ans: A
08.	Conceptual	Ans: A
09.		Ans: B
10.		Ans: D

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01.		Ans: D
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(5)

02 one hectare^{mt} = 100 mt
 $= 100 \times x \text{ mt}$
 $\Rightarrow x = 1$

Ans: A

03 $35 \text{ cm} = 35 \times 10 \text{ m}$
 $= 35 \times \frac{1}{100} \text{ mt} = 0.35 \text{ mt}$

Ans: A

04 $1 \text{ mt} = 1000 \text{ mm}$

Ans: C

05 Conceptual

Ans: A

06 $\frac{BC}{2} = \frac{20}{2} = 10 \text{ cm}$

Ans: B

07 $AB = x + 10 = 5 \Rightarrow x = -5$

$BC = x + 5 = -5 + 5 = 0$

$\therefore AB + BC = 5 + 0 = 5$

Ans: A

08 Conceptual

Ans: D

09 Conceptual

Ans: D

10 P, Q, R

Ans: C

11 $5(5) - 3(3) = 25 - 9 = 16 \text{ cm} = 4 \times 4 = 4^2$

Ans: A, C
B

12 Statement I: Conceptual (True)

Statement II: Conceptual (True)

Ans: A



13 MN, PQ

Ans: B, C

14 $n=4$

No. of line segments = $\frac{n(n-1)}{2}$

$$= \frac{4 \times 3}{2} = 6$$

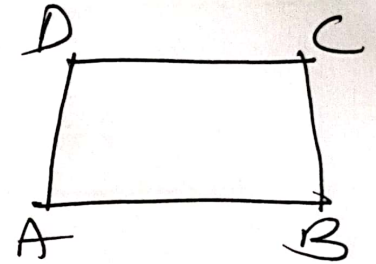
Ans: 6

15 a) Conceptual (2) (P)

b) Conceptual (4) (R)

c) Conceptual (4) (R)

d) Conceptual 3 (P)



Ans: 2, R, R, P

⇒ THE END ⇐