BASIC GEOMETRICAL IDEAS

Class: VI, Mathematics (1)

SOLUTIONS (F)

TEACHING TASK

01. conceptual

Ans. B

02 $V + F = E + 2$

$8 + 6 = E + 2$

$\Rightarrow E = 12$

Ans. A

03 $PQ + QR = PR$

$3 + QR = 10 \Rightarrow QR = 7\text{cm}$

Ans. B

04 $4x = 24$

$\Rightarrow x = 6$

$\therefore AB = 3x$

$= 3 \times 6$

$= 18$

$AB + BC = 24 + 18$

$= 42$

$= AC$

Ans: D

05 $4CD - 2AB$

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

$= 18.0 - 12$

$= 6$

Ans. D

06 $\frac{2}{3} AB = 42$

$\Rightarrow AB = 42 \times \frac{3}{2}$

$\Rightarrow AB = 36$

$\frac{1}{2} BC = 42$

$\Rightarrow BC = 42 \times \frac{2}{1}$

$\Rightarrow BC = 12$

$\therefore AB > BC$

Ans. C

07 $CD = 2x + 5 = 13$

$\Rightarrow x = 4$

Now, $AB + CD + DA$

$= (4 + 10) + (2.4 + 1) + (5.4 + 20)$

$= 14 + 13 + 40 = 67\text{ cm}$

Ans A

08 Conceptual — Ans: C

09 Conceptual — Ans: A

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

11 Conceptual — Ans: B, C

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

13 Conceptual — Ans: A

14 Conceptual — Ans: A

15 $\frac{4}{7} AB = 19.6$
$\Rightarrow AB = 19.6 \times \frac{7}{4}$
$\Rightarrow AB = 34.3$
$CD - 4.6 = 30.1$
$\Rightarrow CD = 34.7$

$BC + 12.4 = 37.9$
$BC = 25.5$

$\frac{DE}{8} = 2.7$
$DE = 21.6$

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

$DE + BC = 21.6 + 25.5 = 47.1$
$\therefore AB + BC > DE + BC$ — Ans: A

16 $AB + BC + CD - x = DE$
$\Rightarrow x = AB + BC + CD - DE$
$= 34.3 + 25.5 + 34.7 - 21.6$
$= 72.9$ — Ans: A

17 $d = 20$ cm, $r = \frac{d}{2} = \frac{20}{2} = 10$ cm — Ans: 10

18 $3AB - CD = 3(6) - 5 = 18 - 5 = 13$ — Ans: B

19 $a \to r,\ b \to s,\ c \to p,\ d = p$

20 $a \to s,\ b \to r,\ c \to q,\ d \to t$

LEARNERS TASK

01. Conceptual — Ans: B

02 Conceptual — Ans.. A

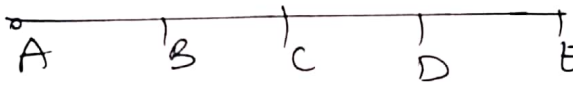
03 Conceptual — Ans.: C

04 Conceptual — Ans: A

05 Conceptual — Ans.: D

06 Conceptual — Ans: D

07



Line segments = AB, AC, AD, AE
BC, BD, BE, CD, CE, DE

NO : 10 — Ans: A

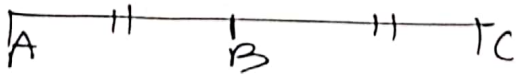
08 Conceptual — Ans: A

09 Conceptual — Ans: B

10. Conceptual — Ans: D

JEE MAINS LEVEL

01



Ans: D

02 Conceptual — Ans: A

03 $35\text{cm} = \frac{35}{100}\text{ mt} = 0.35\text{ mt}$ — Ans: A

04 Conceptual (A) Ans: C

05 Conceptual Ans: A

06 $\frac{BC}{2} = \frac{20}{2} = 10$ cm Ans: B

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

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

$\therefore AB + BC = 5 + 0 = 5$ cm Ans: A

08 Conceptual Ans: D

09 Conceptual Ans: D

10 P, Q, R. Ans: C

11. $5AB - 3CD$
$= 5(5) - 3(3)$
$= 25 - 9$
$= 16$ cm (or) 4^2 cm (or) 4×4 cm Ans: A, B, C

~~ADVANCED~~ ~~LEVEL~~

12 Conceptual Ans: A

13 $\overline{MN}$, $\overline{PQ}$ Ans: A, C

14. $n = 4$, No. of line segments $= \frac{n(n-1)}{2}$
$= \frac{4 \times 3}{2} = 6$ Ans: 6

15 $a \to q$, $b \to r$, $c \to r$, $d \to p$

$\Rightarrow$ THE END $\Leftarrow$