

4. UNDERSTANDING

2025/26 ①

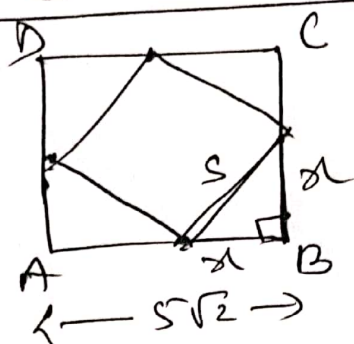
QUADRILATERALS

Class: VIII; MATHEMATICS

INTEGRATED, SOLUTIONS

JEE MAINS: TEACHING TASK

01



$$x = \frac{5\sqrt{2}}{2} = \frac{5}{\sqrt{2}}$$

$$x^2 = x^2 + x^2 = \frac{25}{2} + \frac{25}{2} = 25$$

$$\therefore x = 5$$

Ans: B

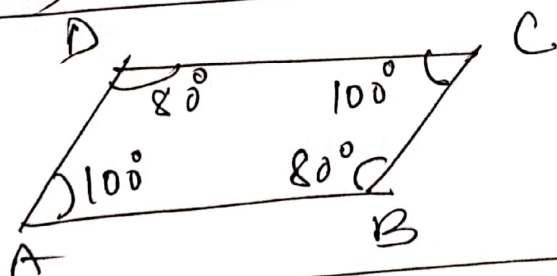
02

$$x + x + x + 120^\circ = 360^\circ$$

$$\Rightarrow x = 80^\circ$$

Ans: A

03



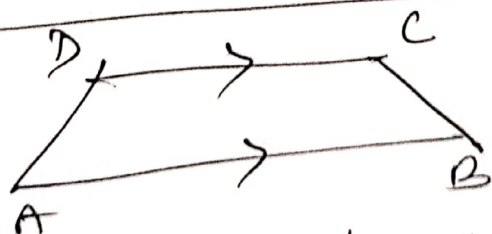
Ans: A

04

$$\angle C + \angle D = 180^\circ$$

Ans: B

05



$$\angle A + \angle D = 180^\circ, \quad \angle B + \angle C = 180^\circ$$

Ans: C

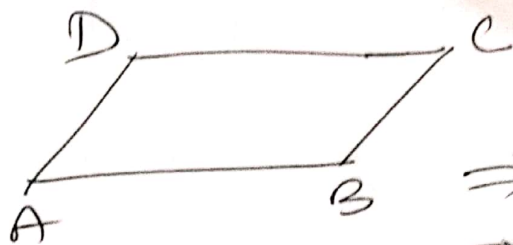
06

From figure $\frac{AE}{EB} = \frac{DF}{FC}$

$$\Rightarrow \frac{AE}{2AE} = \frac{1.5}{FC} \Rightarrow FC = 3 \text{ cm}$$

Ans: B

07



$$\angle A = \angle C$$

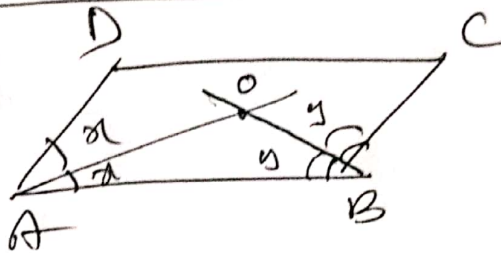
$$\Rightarrow 2x + 36^\circ = x + 120^\circ$$

$$\Rightarrow x = 84^\circ$$

Ans: B

(2)

08



$$\angle A + \angle B = 180^\circ$$

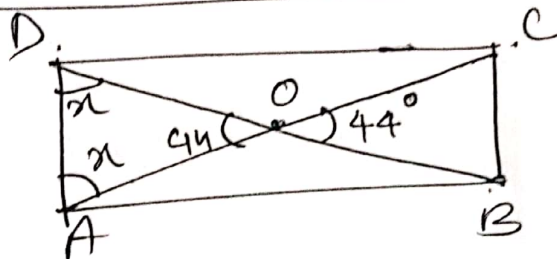
$$\Rightarrow 2x + 2y = 180^\circ$$

$$\Rightarrow x + y = 90^\circ$$

$$\therefore \angle AOB = 90^\circ$$

Ans: B

09

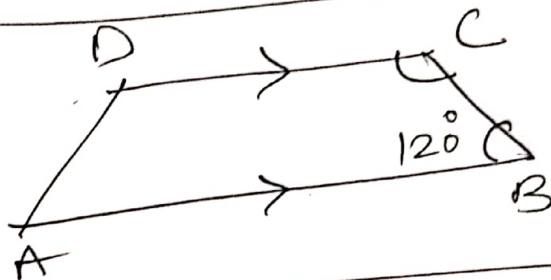


$$x + x + 44^\circ = 180^\circ$$

$$\Rightarrow x = 68^\circ$$

Ans: A

10



$$\angle B + \angle C = 180^\circ$$

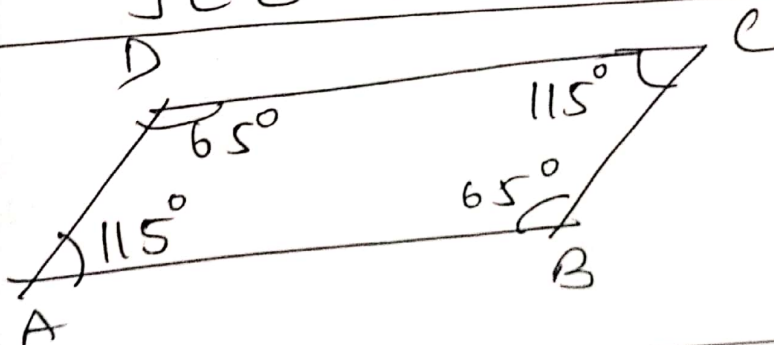
$$120^\circ + \angle C = 180^\circ$$

$$\angle C = 60^\circ$$

Ans: D

JEE ADVANCED

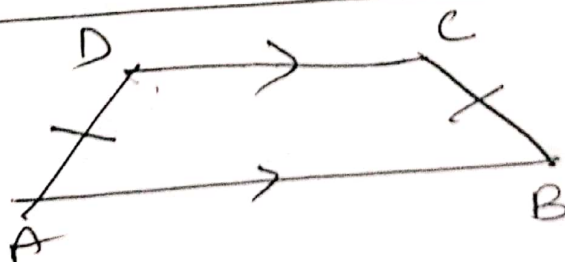
11.



$$\frac{180^\circ}{115^\circ} = 65^\circ$$

Ans: A, C, D

12

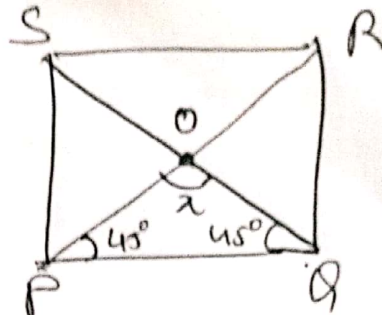


$$\angle A = \angle B$$

$$\angle C = \angle D$$

$$AC = BD$$

Ans: A, B, C

13. Statement I:  $45^\circ + 45^\circ + x = 180^\circ$ (3)
 $\Rightarrow x = 90^\circ$ (False)

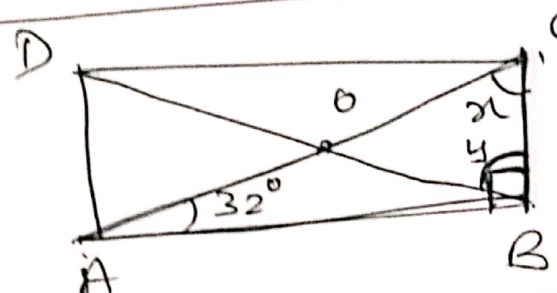
Statement II: Conceptual (True)

Ans: D

14. Statement I: Conceptual (True)

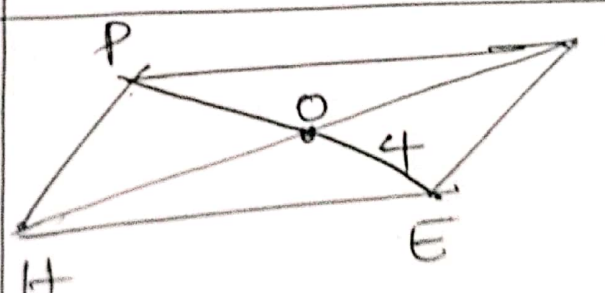
Statement II: Conceptual (True)

Ans: A

15.  $x + 32^\circ + 90^\circ = 180^\circ$
 $\Rightarrow x = 58^\circ$ Ans: A

16. $\triangle OBC$ is an isosceles $\triangle$
 $\therefore OB = OC \Rightarrow \angle OBC = 58^\circ$

Ans: C

17.  $PE = x$
 $HL = x + 5$

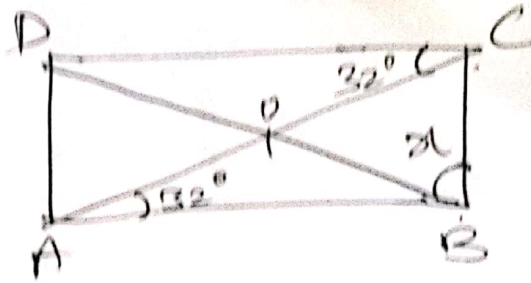
$\therefore PE = 2OE = 2 \times 4 = 8 \text{ cm}$

$\therefore HL = 8 + 5 = 13 \text{ cm}$

$\therefore OH = 6.5 \text{ cm}$ (Integral value = 6) Ans: 6

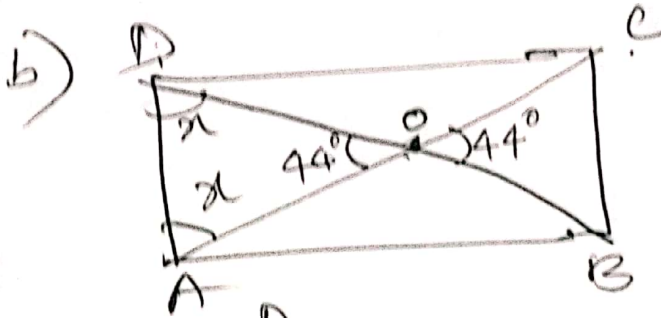
18.  $\angle GRN = 70^\circ$
 $LR = LN$
 $\therefore \angle LNI = 70^\circ$ Ans: 70°

19 a)



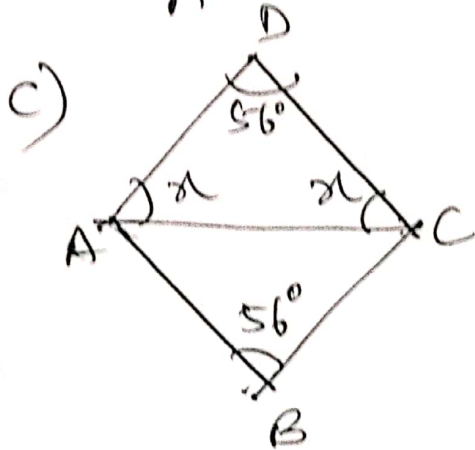
$$\angle A + \angle B + \angle C = 180^\circ \quad \therefore \angle OBC = 90^\circ - 32^\circ = 58^\circ$$

$$\therefore \angle OBC = 58^\circ (P)$$



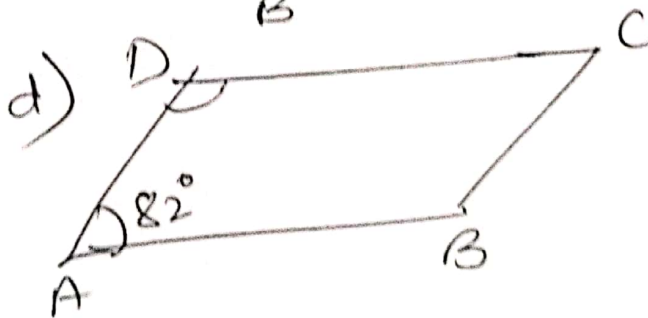
$$x + x + 44^\circ = 180^\circ$$

$$\Rightarrow 68^\circ (x)$$



$$x + x + 56^\circ = 180^\circ$$

$$\Rightarrow x = 62^\circ (S)$$



$$\angle A + \angle D = 180^\circ$$

$$\therefore 82^\circ + \angle D = 180^\circ$$

$$\Rightarrow 98^\circ (P)$$

$\therefore$ Ans: P, x, S, P

20

a) Conceptual (P)

b) Conceptual (P)

c) Conceptual (S)

d) Conceptual (x)

Ans: P, P, S, x

LEARNERS TASK (COURSE)

(5)

01. Conceptual

Ans: A

02. $\angle A = \angle C \Rightarrow \angle A - \angle C = 0^\circ$

Ans: A

03. Conceptual

Ans: B

04. Conceptual

Ans: A

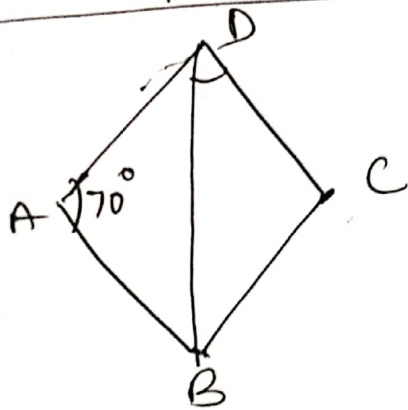
05. Conceptual

Ans: D

06. Conceptual

Ans: D

07.



$\angle D = 110^\circ$

$\therefore \angle CDB = 55^\circ$

Ans: C

08. Conceptual

Ans: D

09. Conceptual

Ans: D

10. Conceptual

Ans: B

JEE MAINS LEVEL

01.

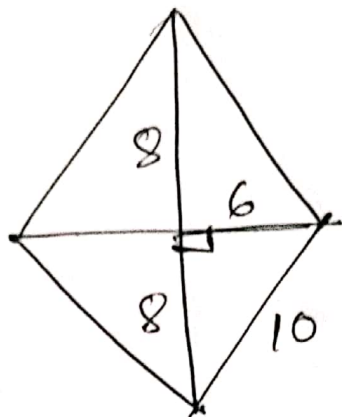
$x + 320^\circ = 360^\circ \Rightarrow x = 40^\circ$

Ans: C

02. 90°

Ans: B

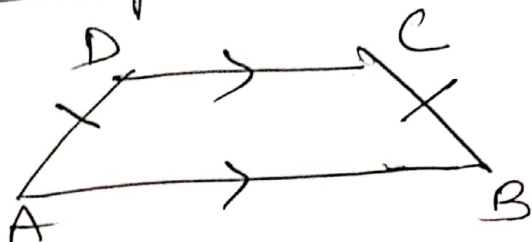
03

other diagonal $= 2 \times 6 = 12 \text{ cm}$

(6)

Ans. D

04 Conceptual



$\Rightarrow \angle A = \angle B$

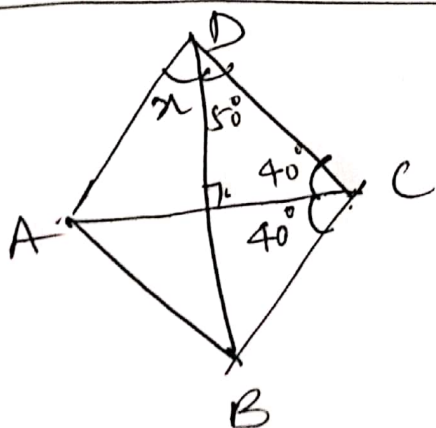
Ans: A

05 $75^\circ + 90^\circ + 75^\circ + x = 360^\circ$

$\Rightarrow x = 120^\circ$

Ans: D

06



$x = 50^\circ$

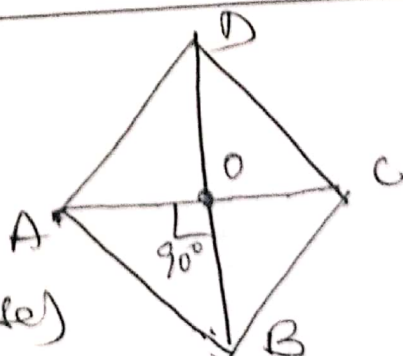
Ans: C

ADVANCED LEVEL

07 Conceptual

Ans: B, C

08 Statement I

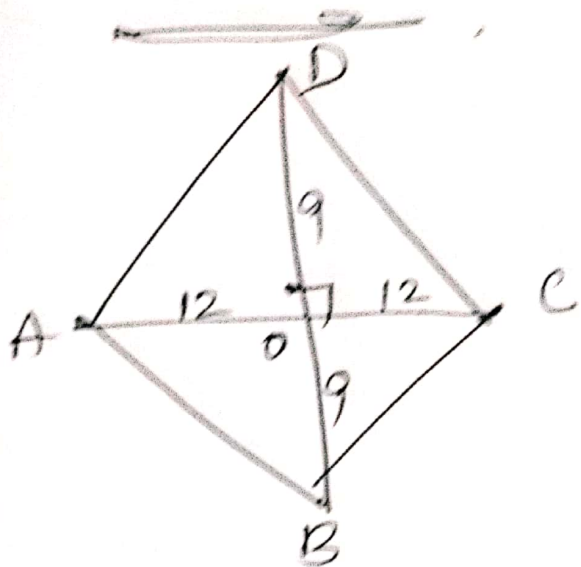


True

Statement II (False)

Ans: C

09.



$$AO = OC = 12 \text{ cm}$$

Ans. B

Ans. 90° 10 90°

11. A) $\angle B + \angle D = 180^\circ$ (q)

B) 360° (r)

C) Convex quadrilateral (s)

D) Concave quadrilateral (p)

Ans: q, r, s, p

$\Rightarrow$ THE END $\Leftarrow$