

5. QUADRILATERALS ①

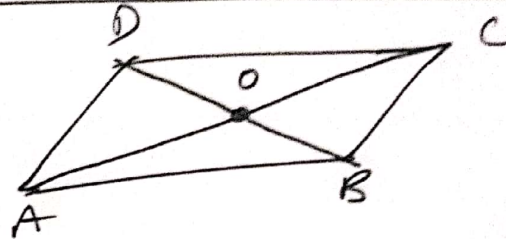
Class: VIII . MATHEMATICS

FOUNDATION . SOLUTIONS

TEACHING TASK
JEE MAINS LEVEL

2025/26

01 Conceptual

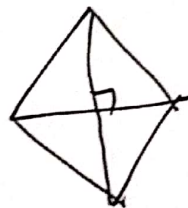


Ans: C

02 Conceptual

Ans: C

03 90°

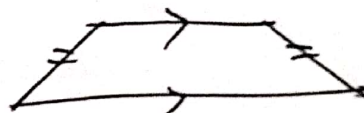


Ans: A

04 Conceptual

Ans: C

05



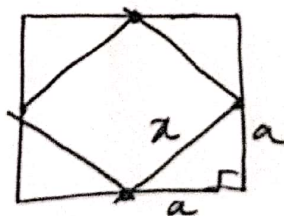
Ans: A

06

$$a^2 + a^2 = d^2$$

$$\Rightarrow 2a^2 = d^2$$

$$\therefore a = \frac{d}{\sqrt{2}}$$



$$= \frac{\sqrt{2} \times 5\sqrt{2}}{2} = 5 \text{ cm}$$

Ans: B

07

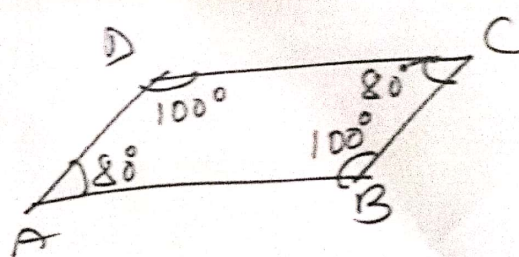
$$x^\circ + x^\circ + x^\circ + 120^\circ = 360^\circ$$

$$\Rightarrow 3x^\circ = 240^\circ$$

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

Ans: A

08



(2)

Ans: A

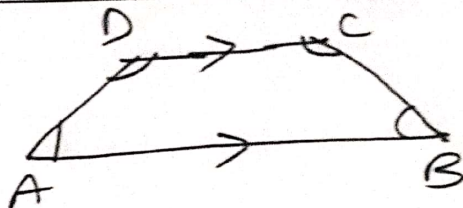
09

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

Ans: B

10

Conceptual



Ans: C

11

$$\frac{AE}{BE} = \frac{DF}{FC}$$

$$\Rightarrow \frac{AE}{2AE} = \frac{1.5}{FC} \Rightarrow FC = 30\text{cm}$$

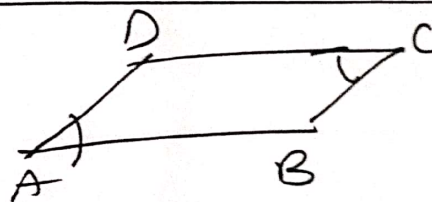
Ans: B

12

$$\angle A = \angle C$$

$$2x + 30^\circ = x + 120^\circ$$

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



Ans: B

13

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

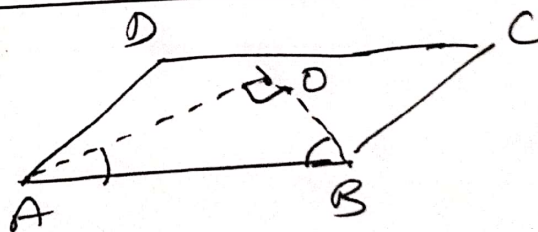
proof:

We know

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

$$\Rightarrow \frac{\angle A}{2} + \frac{\angle B}{2} = 90^\circ$$

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

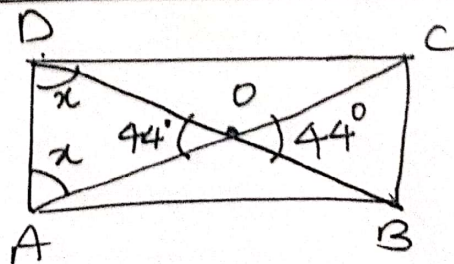


Ans: B

14

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

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



Ans: A

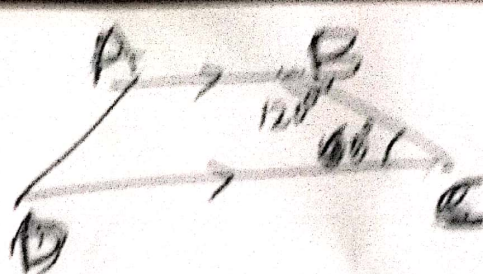
15

We know

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

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

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

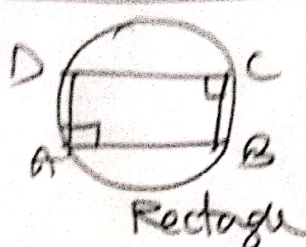


(2)

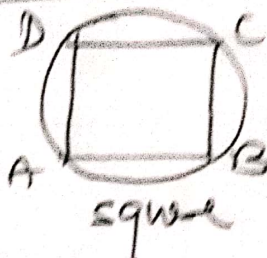
Ans: D

JEE ADVANCED LEVEL

01.



Rectangle

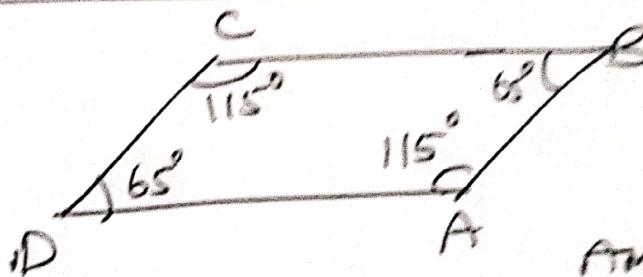


Square

Since $\angle A + \angle C = 180^\circ$

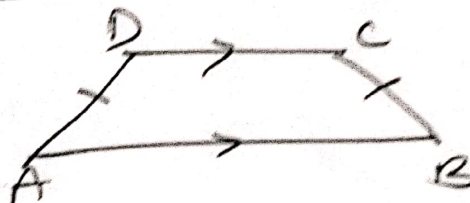
Ans: A, B

02 Conceptual



Ans: A, C, D

03 Conceptual



Ans: A, B, C

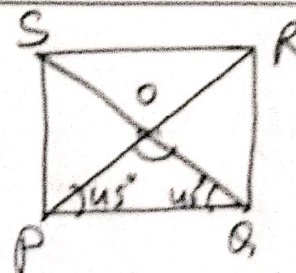
04 Statement I: Conceptual (True)

Statement II: Conceptual (False)

Ans: C

05 Statement I: $\angle POQ = 90^\circ$

(False)



Statement II: Conceptual (True)

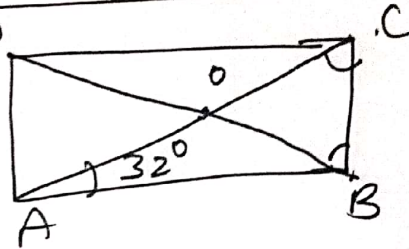
Ans: C

06 Statement I: Conceptual (True)
Statement II: Conceptual (True) (4)
Ans: A

07 Assertion: Conceptual (True)
Reason: Conceptual (False) Ans: C

08 Assertion: Conceptual (True)
Reason: Conceptual (True) Ans: A

09 $32^\circ + \angle ACB + 90^\circ = 180^\circ$
 $\Rightarrow \angle ACB = 58^\circ$ Ans: A

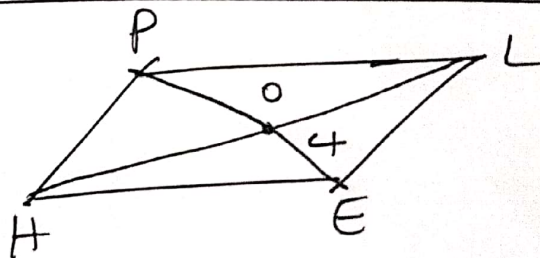


10 $\angle ACB = \angle OBC = 58^\circ$ Ans: C

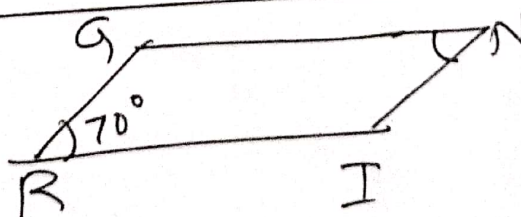
11 Conceptual Ans: A

12 Conceptual Ans: B

13 $PE = 4 + u = 8 \text{ cm}$
 $HL = 8 \text{ cm} + 5 \text{ cm}$
 $= 13 \text{ cm}$
 $\therefore OH = \frac{13}{2} = 6.5 \text{ cm}$
Integer answer = 6



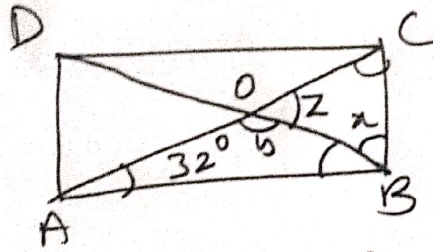
14 $\angle LN = 70^\circ$ Ans: 6



15 Conceptual Ans: 90^\circ

16

a)



$$\angle AOB = 180^\circ - (32^\circ + 32^\circ)$$

$$= 116^\circ$$

$$\angle BOC = 180^\circ - 116^\circ$$

$$= 64^\circ$$

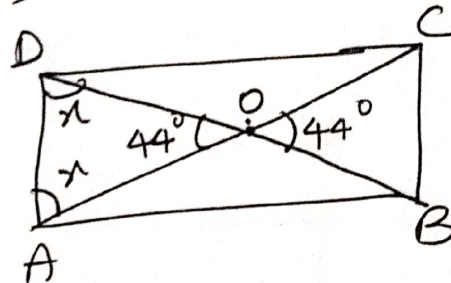
$$\therefore x + x + 64^\circ = 180^\circ$$

$$\Rightarrow \angle x = 58^\circ (q)$$

b)

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

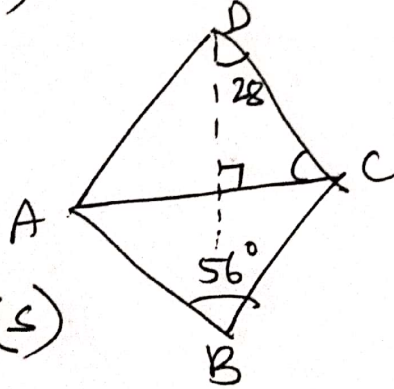
$$x = 68^\circ (r)$$



c)

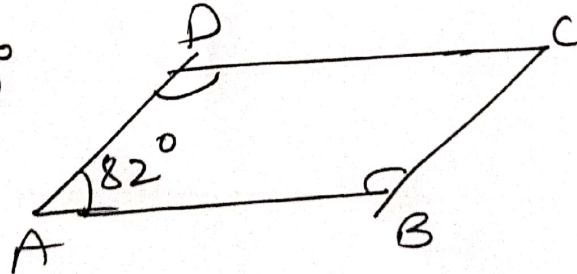
$$\angle ACD + 28^\circ = 90^\circ$$

$$\therefore \angle ACD = 62^\circ (s)$$



$$d) 82^\circ + \angle D = 180^\circ$$

$$\therefore \angle D = 98^\circ (p)$$



Ans: q, r, s, p

- 17 a) Isosceles Trapezium (P)
 b) Kite (Q)
 d) parallelogram (R)
 e) Trapezium (S)

(6)

Ans: P, Q, S, R

LEARNERS TASK (CUE'S)

01 Conceptual

Ans: C

02 Conceptual

Ans: C

03 Conceptual

Ans: A

04 Conceptual

Ans: C

05 Conceptual

Ans: B

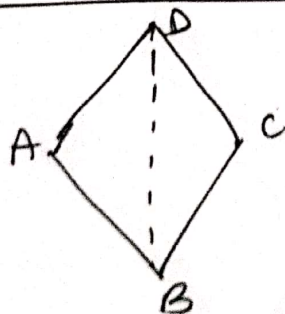
06 Conceptual

Ans: A

07 $LA = LC \Rightarrow LA - LC = 0^\circ$

Ans: A

08



$$\triangle ABD \cong \triangle BCD$$

Ans: B

09 Conceptual

Ans: A

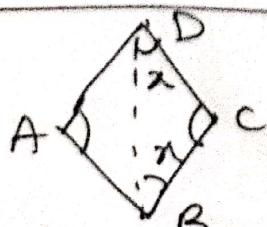
10 Conceptual

Ans: D

11 360°

Ans: D

12



$$LA = LC = 70^\circ$$

$$\therefore x \neq x + 70^\circ = 180^\circ \Rightarrow x = 55^\circ$$

Ans: C

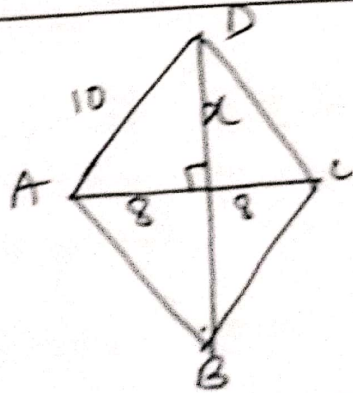


13	Conceptual	Ans D
14	Conceptual	Ans D
15	Conceptual	Ans B

JEE MAINS LEVEL

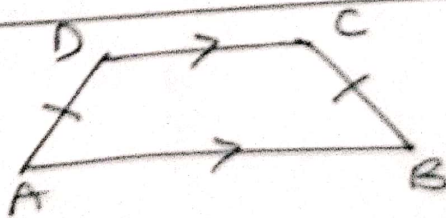
01	Conceptual	Ans A
02	120°	Ans A
03	Conceptual	Ans A
04	Conceptual	Ans D
05	Conceptual	Ans B
06	$360^\circ - 320^\circ = 40^\circ$	Ans C
07	90°	Ans B

08 $8^2 + x^2 = 10^2$
 $x = \sqrt{36}$
 $x = 6$
 $\therefore BD = 12 \text{ cm}$



Ans D

09 $LA = LB$

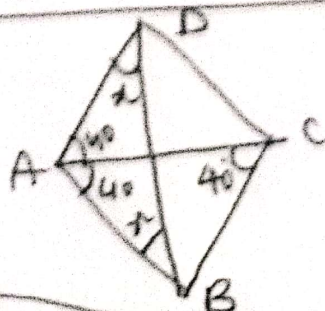


Ans A

10 $360^\circ - (75^\circ + 90^\circ + 75^\circ) = 120^\circ$

Ans D

11.



$x + x + 80^\circ = 180^\circ$

$x = 50^\circ$

Ans C

JEE ADVANCED LEVEL

(8)

01 Conceptual

Ans: A, B, C

02 Conceptual

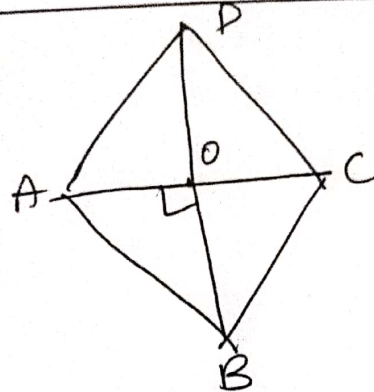
Ans: B, C

03 Statement I: Conceptual (True)

Statement II: Conceptual (False)

Ans: C

04 Statement I:



$90^\circ = \angle AOB$ (True)

Statement II: Conceptual (False)

Ans: C

05. Assertion: Conceptual (True)

Reason: Conceptual (~~False~~) True

Ans: A

06 Assertion: Conceptual (False)

Reason: Conceptual (True)

Ans: D

07 $AO = \frac{AC}{2} = \frac{24}{2} = 12\text{cm}$

Ans: B

08 $\text{Area} = \frac{1}{2} \times 12 \times 9 = 54$

Ans: A

09 Conceptual

Ans: B

10 Conceptual

Ans: B

11. 90°

(9)

12. Square, Rhombus, parallelogram, Rectangle

Ans. 4

13 a) 180° (q)

b) 360° (x)

c) Convex quadrilateral (s)

d) Concave quadrilateral (p)

Ans: q, x, s, p

14 a) Square (p)

b) Kite (q)

c) Rectangle (x)

d) parallelogram (s)

Ans.. p, q, x, s

$\Rightarrow$ THE END $\Leftarrow$