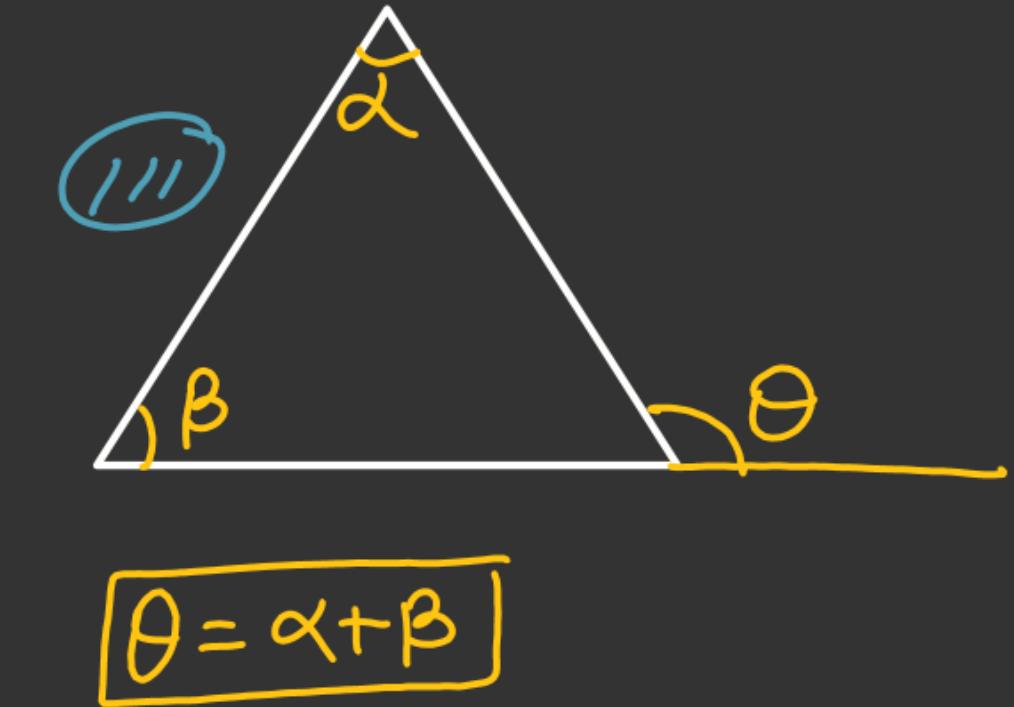
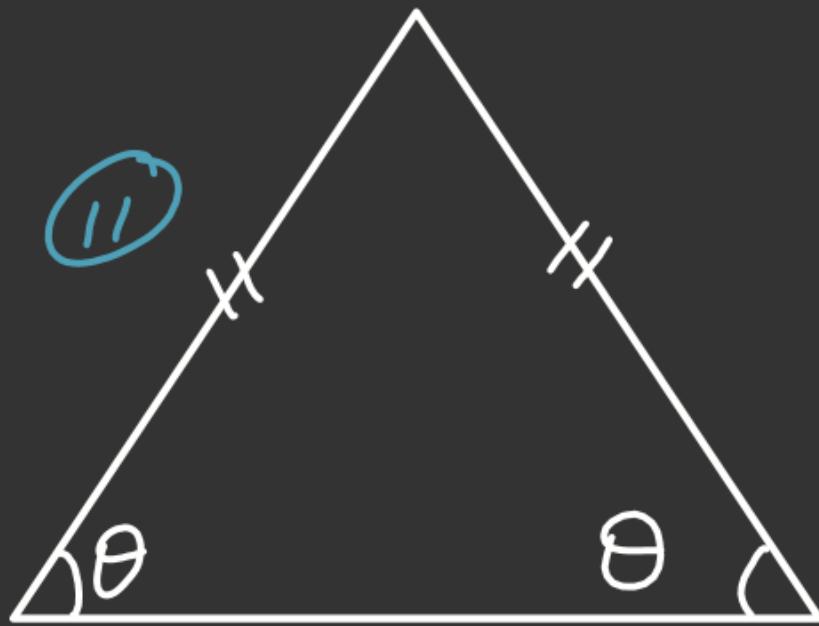
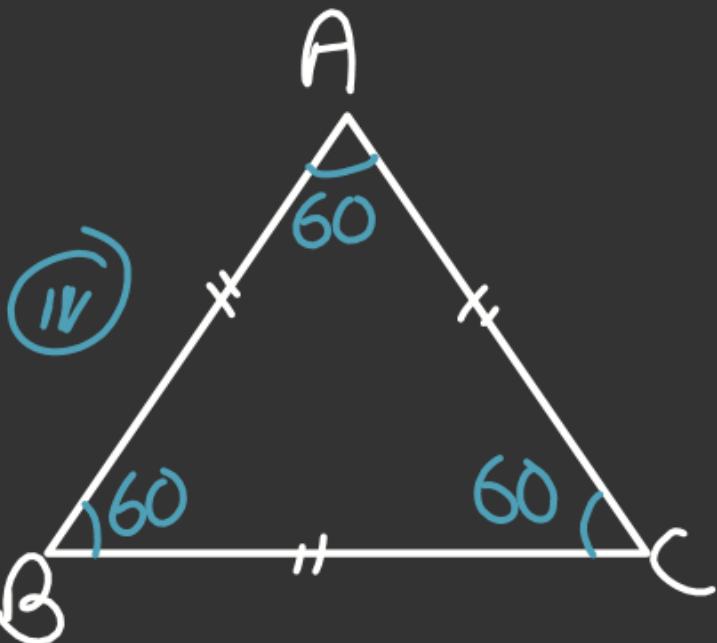
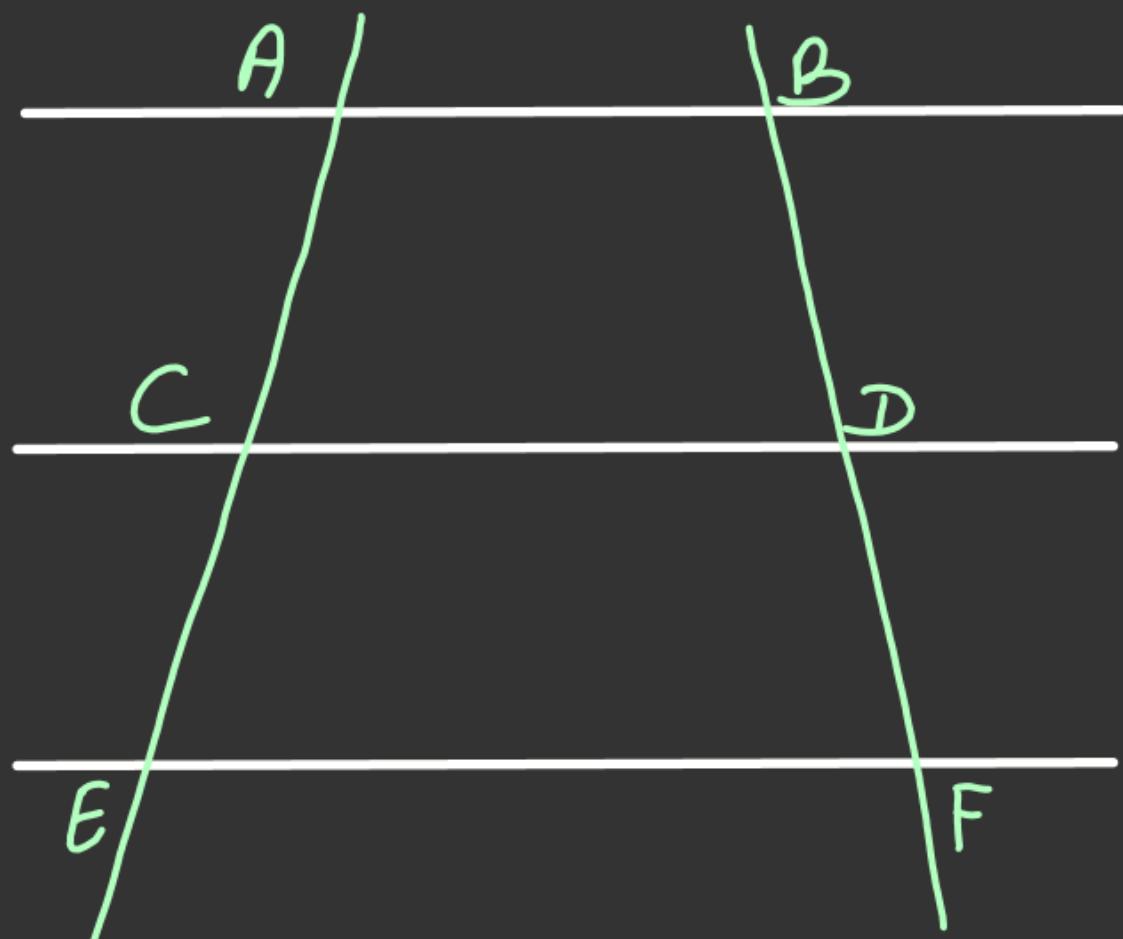


$$\angle A + \angle B + \angle C = 180^\circ$$

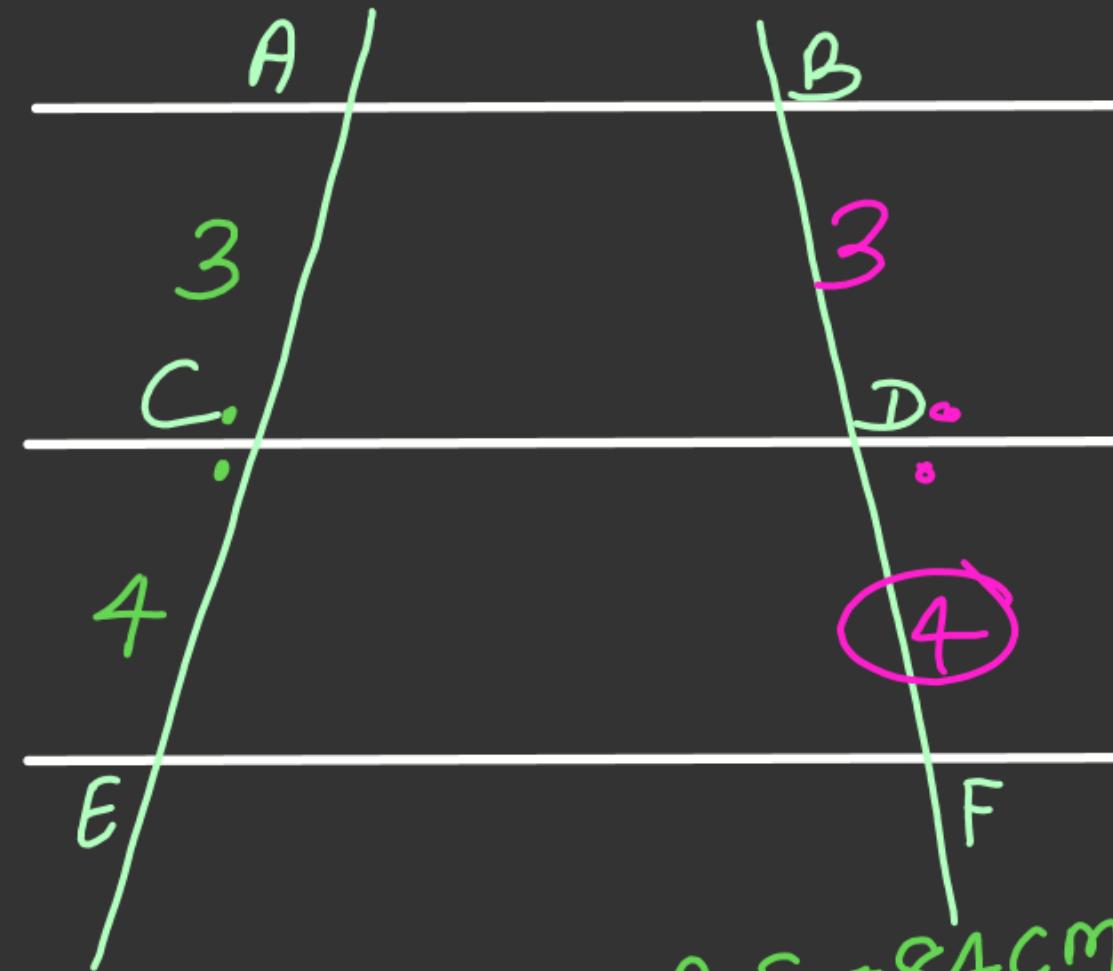


$$\theta = \alpha + \beta$$





$$AC : CE = BD : DF$$



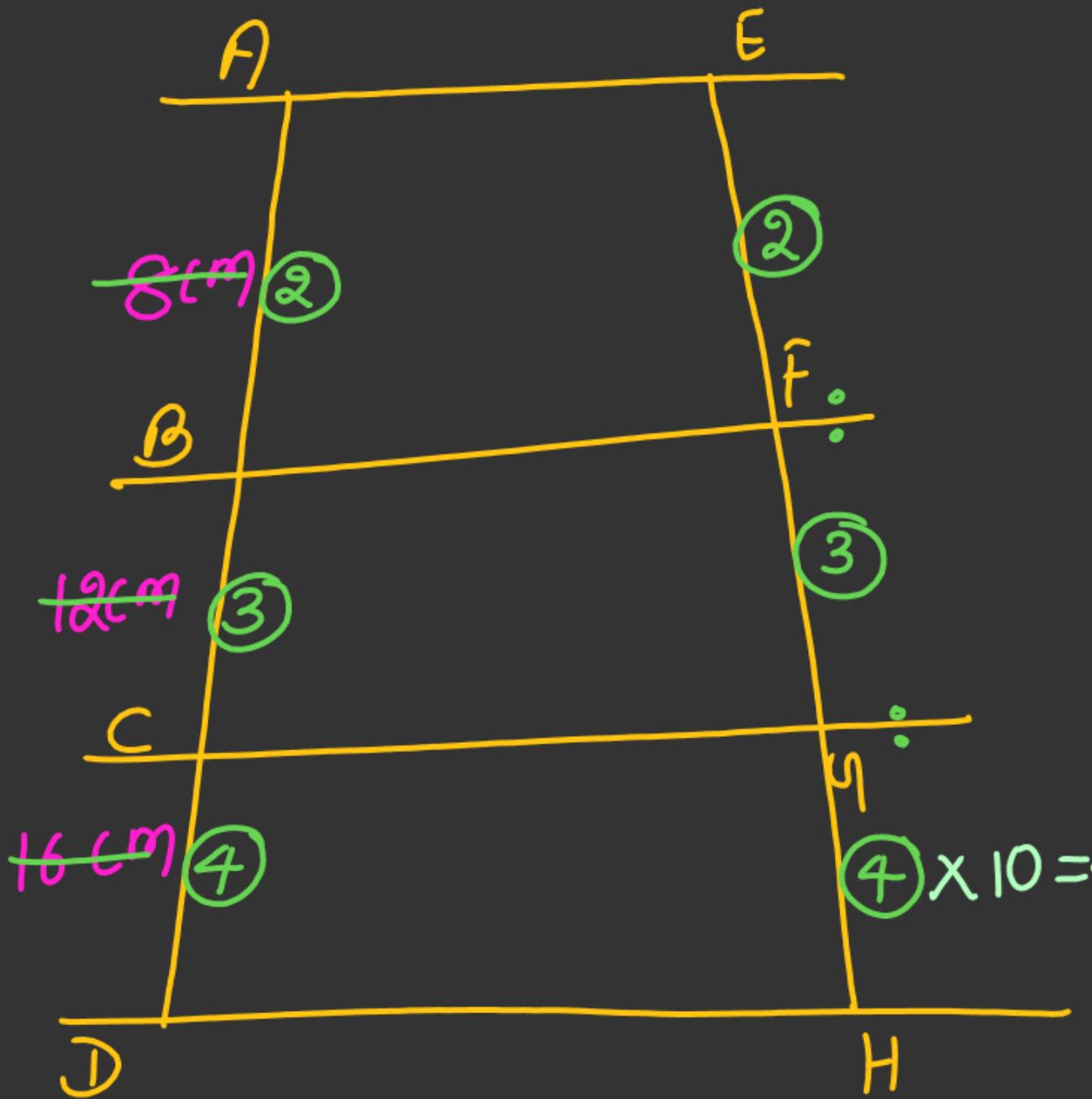
$$BF = 84 \text{ cm}$$

$$\therefore 7 = 84 \text{ cm}$$

$$\therefore 4 = \frac{84}{7} \times 4$$

$$= 48 \text{ cm}$$

$$DF =$$



$$EH = 90\text{cm}$$

$$GH =$$

$$\begin{aligned} & \therefore g = 90\text{cm} \\ & \therefore l = 10\text{cm} \end{aligned}$$

**KGS**



**| KGS**

# **LINE AND ANGLE**



**By: P.K Sir**



01.

The measure of an angle is  $14^\circ$  less than the measure of its complementary angle then find the value of angle ?

एक कोण का मान उसके कोटिपूरक कोण से  $14^\circ$  कम है।  
कोण का मान ज्ञात करें।

- (A)  $44^\circ$
- (B)  $34^\circ$
- (C)  $52^\circ$
- (D)  $38^\circ$

<i>Angle</i>	<i>C.A</i>
$\theta$	$90 - \theta$
$38^\circ$	$90 - 38$ $= 52^\circ$

$$\theta = 90 - \theta - 14$$

~~(D)  $38^\circ$~~

$$2\theta = 76$$

$$\boxed{\theta = 38}$$



02.

The measure of the supplementary of an angle is  $10^\circ$  more than four times of original angle, find the complementary angle of that particular angle?

किसी कोण का संपूरक कोण उस कोण के चार गुने से  $10^\circ$  अधिक है। मूल कोण का कोटिपूरक कोण ज्ञात करें।

(A)  $26^\circ$

~~(C)  $56^\circ$~~   
कोण  
Angle

$\theta$

34

(B)  $34^\circ \rightarrow 500^\circ/\text{गलत}$

(D)  $70^\circ$   
कोटी पुरक कोण

सम्पुरक कोण  
Supplementary

$180 - \theta$

$146^\circ$

$90 - 34$   
 $= 56^\circ \text{ Ang}$

$$180 - \theta = \theta \times 4 + 10$$

$$180 - 10 = 4\theta + \theta$$

$$170 = 5\theta$$

$$\theta = \frac{170}{5} = 34^\circ$$



03.

The supplementary angle of angle K is  $(12x + 4)^\circ$  and the complement of angle K measures  $6x^\circ$  what is K?

कोण K का संपूरक कोण  $(12x + 4)^\circ$  है और कोटिपूरक  $6x^\circ$  है।  
K का मान क्या होगा।

- ~~(A)  $4^\circ$~~   
(C)  $14.3^\circ$

- (B)  $4.2^\circ$   
(D)  $6^\circ$

$$\begin{array}{c} \text{कोण} \\ K \\ \Downarrow \\ 4^\circ \end{array}$$

$$\begin{array}{c} \text{सम्पूरककोण} \\ (12x + 4)^\circ \end{array}$$

$$\begin{array}{c} \text{कोटिपूरककोण} \\ 6x^\circ \\ \Downarrow \\ 86^\circ \end{array}$$

$$\begin{array}{c} K + 86 = 90 \\ K = 4 \end{array}$$

$$S - C = 90^\circ$$

$$12x + 4 - 6x = 90^\circ$$

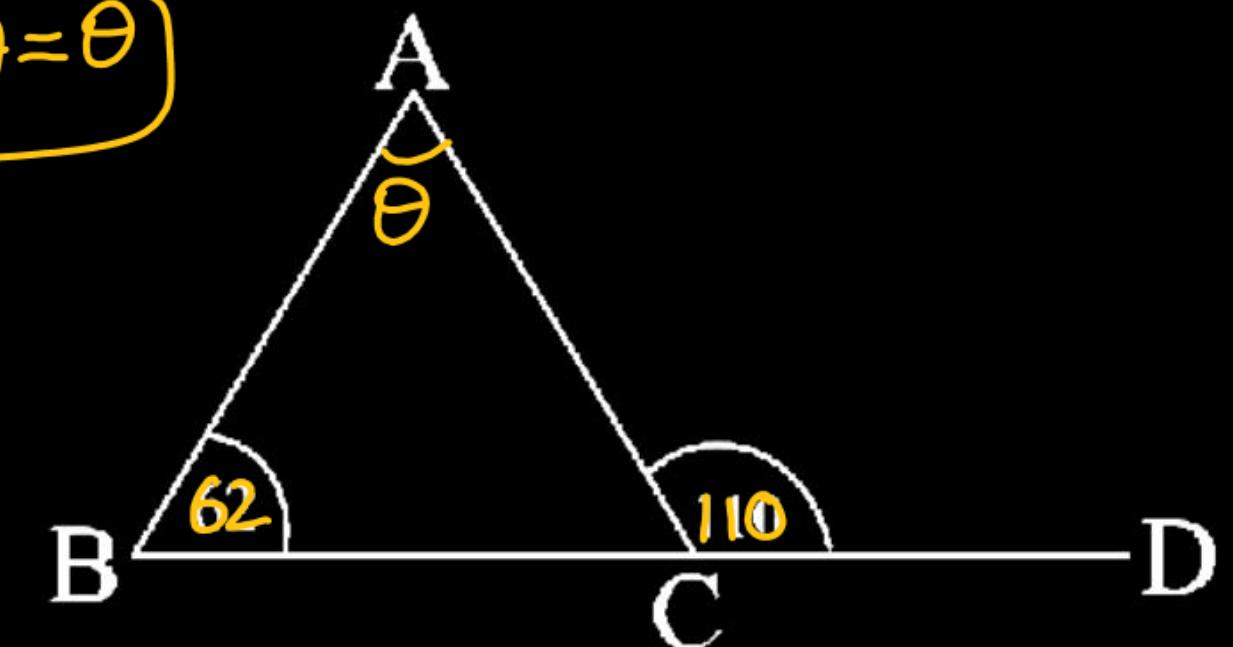
$$6x = 86^\circ$$



04. In the figure, the measure of angle  $\angle BAC$  is

चित्र में कोण  $\angle BAC$  का माप है

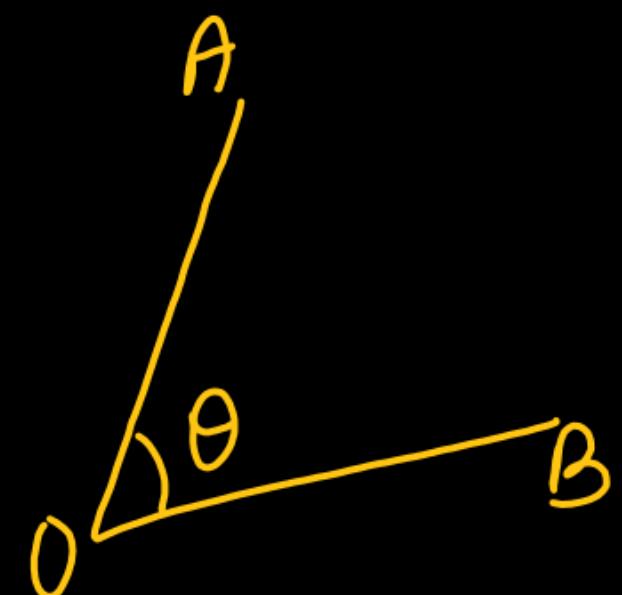
$$\boxed{\angle BAC = \angle CAB = \angle A = \theta}$$



- (A)  $56^\circ$   
(C)  $58^\circ$

$$\begin{aligned}62 + \theta &= 110 \\ \theta &= 110 - 62 \\ \theta &= 48^\circ\end{aligned}$$

- (B)  $62^\circ$   
~~(D)  $48^\circ$~~



$$\angle AOB = \angle BOA = \angle O = \theta$$

05.

In a triangle, values of all the angles are integers. Which one of the following cannot be the proportion of their measures ?

एक त्रिभुज में, सभी कोणों के मान पूर्णांक है। निम्नलिखित में से कौन-सा उनके मापों का अनुपात नहीं हो सकता है?

(A)  $1 : 2 : 3 \rightarrow \text{✓}$

(B)  $3 : 4 : 5 \rightarrow \text{✓}$

(C)  $5 : 6 : 7 \rightarrow \text{✓}$

(D)  $6 : 7 : 8 \rightarrow \text{✗}$

$180^\circ$

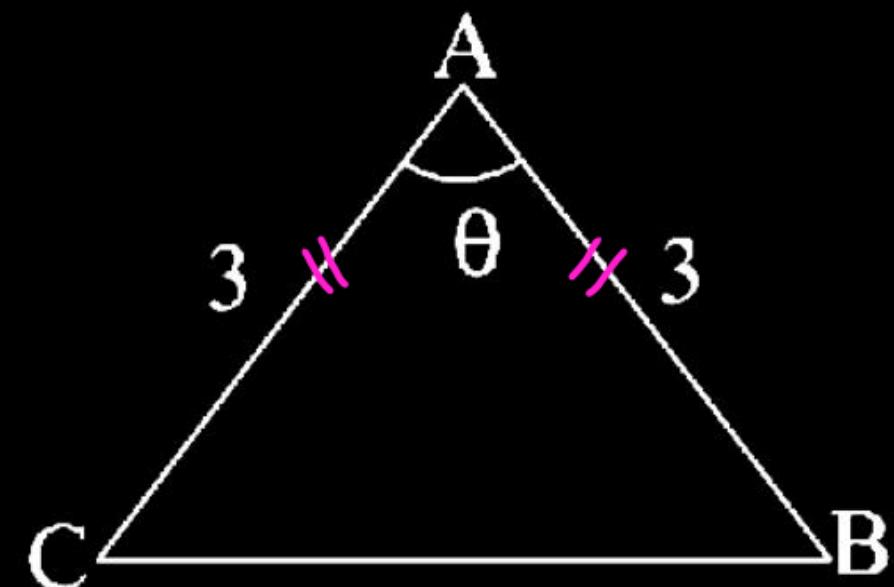
Note:-



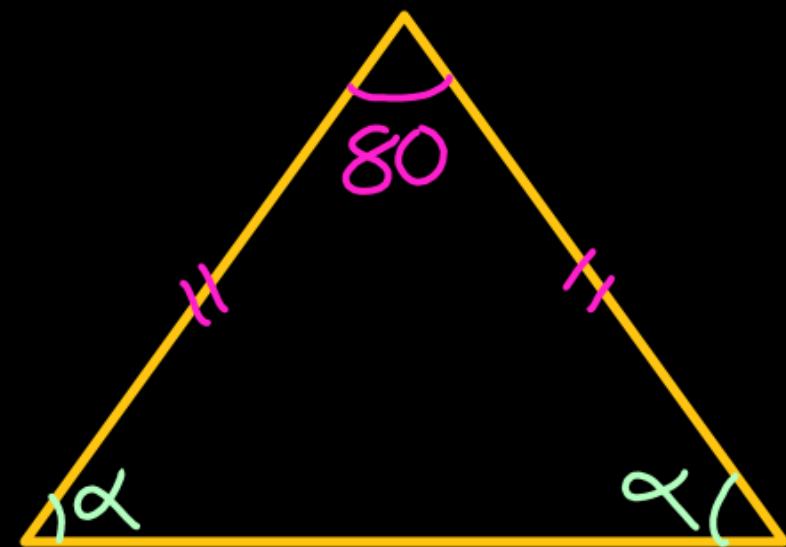
06.

In the given figure  $\Delta ABC$ , If  $\theta=80^\circ$ , the measure of each of the other two angles will be :

दी गई आकृति में,  $\Delta ABC$  में, यदि  $\theta=80^\circ$  है, तो अन्य दो में से प्रत्येक कोण की माप क्या होगी ?



- (A)  $60^\circ$
- (B)  $40^\circ$
- (C)  $80^\circ$
- (D)  ~~$50^\circ$~~



$$\alpha + \alpha + 80 = 180$$

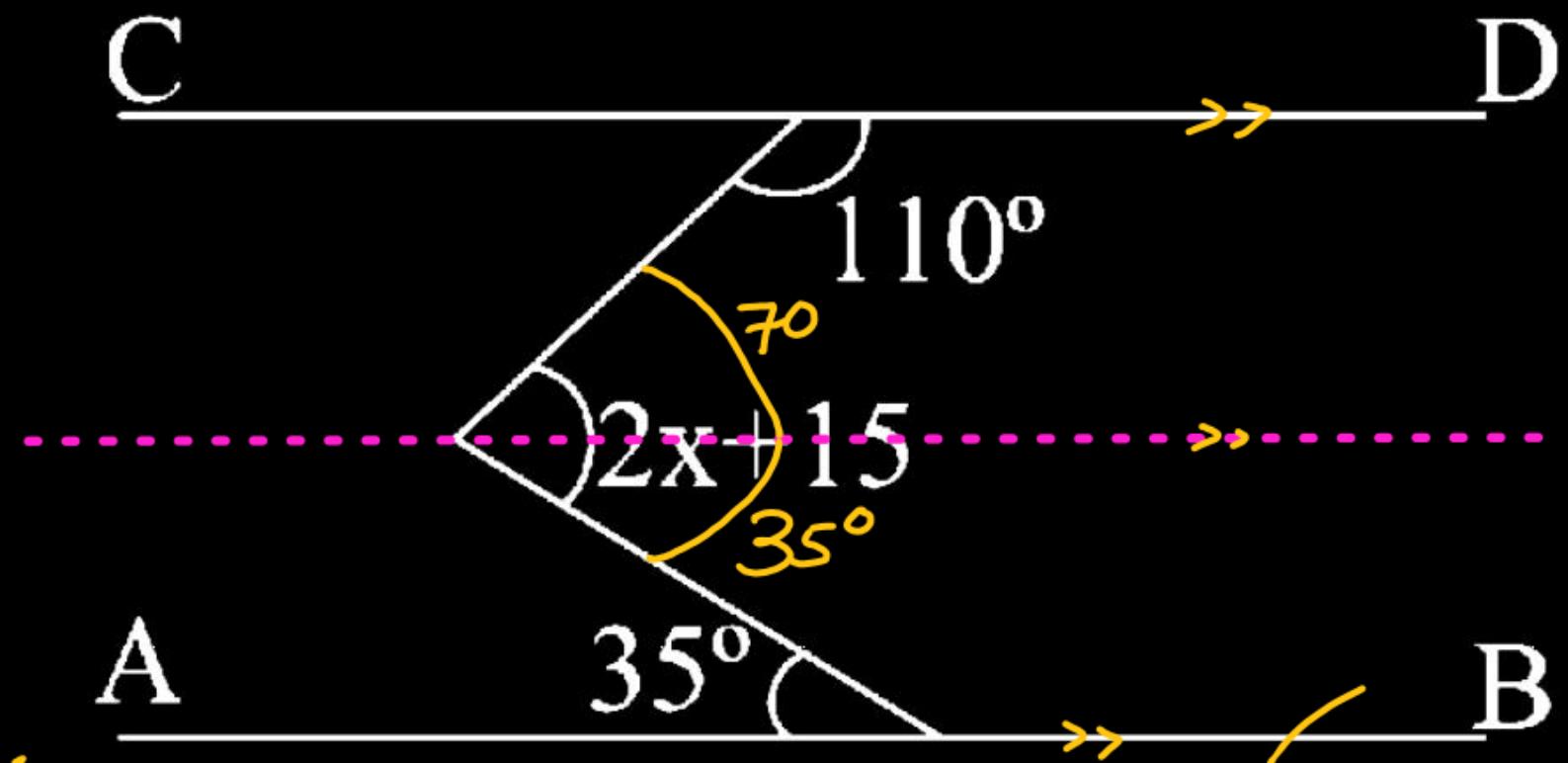
$$2\alpha = 100$$

$$\alpha = 50$$

07.

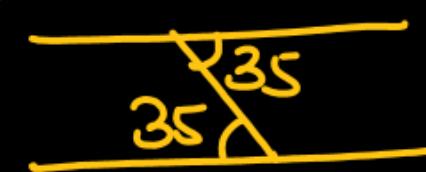
In the given fig. below  $AB \parallel CD$ , find  $x$  ?

नीचे दिए गए चित्र में  $AB \parallel CD$ ,  $x$  का मान ज्ञात करें।



- (A)  ~~$45^\circ$~~   
(C)  $35^\circ$

- (B)  $40^\circ$   
(D)  $67.5^\circ$



$$2x + 15 = 105$$

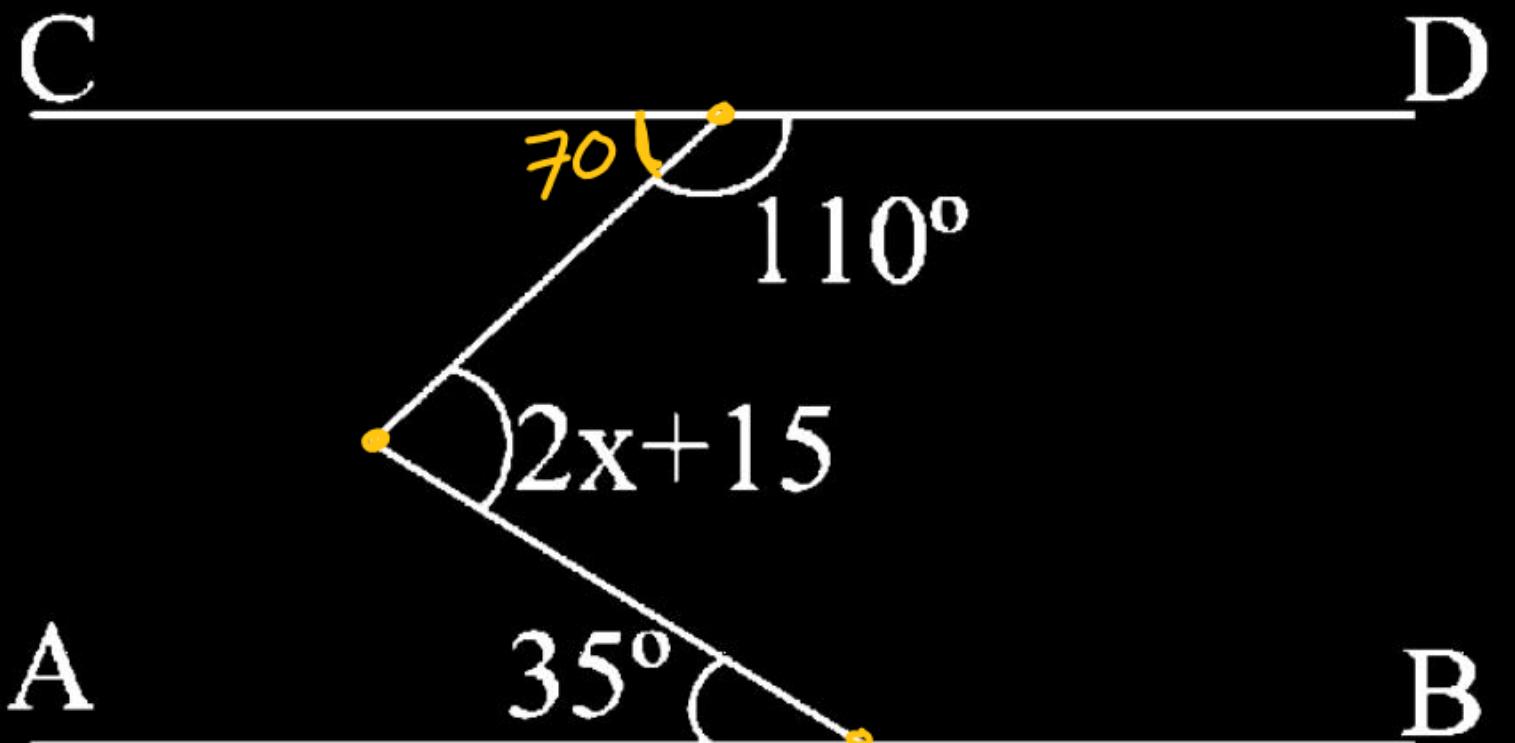
$$2x = 90$$

$$x = 45^\circ$$

07.

In the given fig. below  $AB \parallel CD$ , find  $x$  ?

नीचे दिए गए चित्र में  $AB \parallel CD$ ,  $x$  का मान ज्ञात करें।



- ~~(A)  $45^\circ$~~   
(C)  $35^\circ$

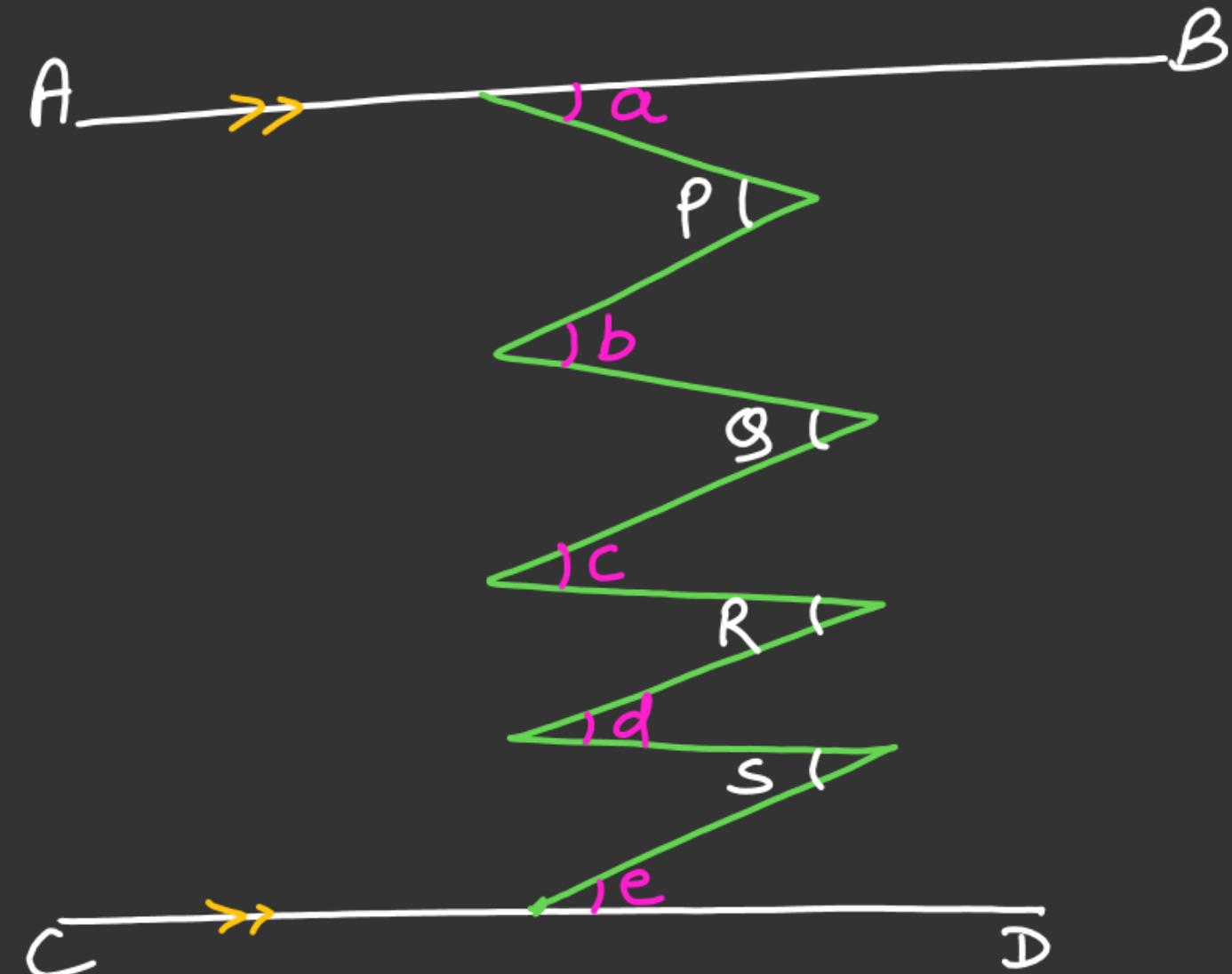
- (B)  $40^\circ$   
(D)  $67.5^\circ$

$$2x + 15 = 70 + 35$$

$$2x = 105 - 15 = 90$$

$$x = 45$$

concept



$$a + b + c + d + e = P + Q + R + S$$

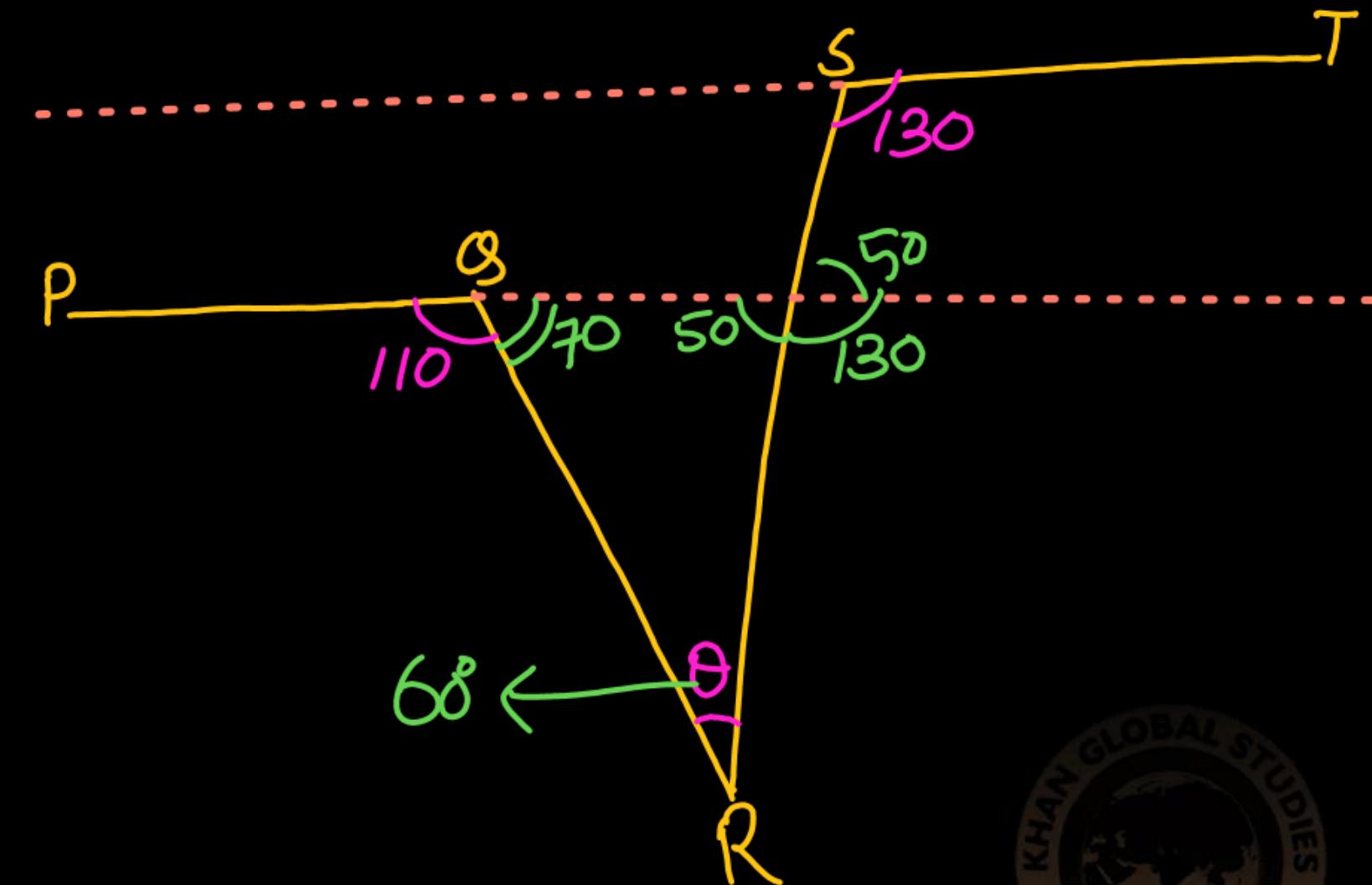
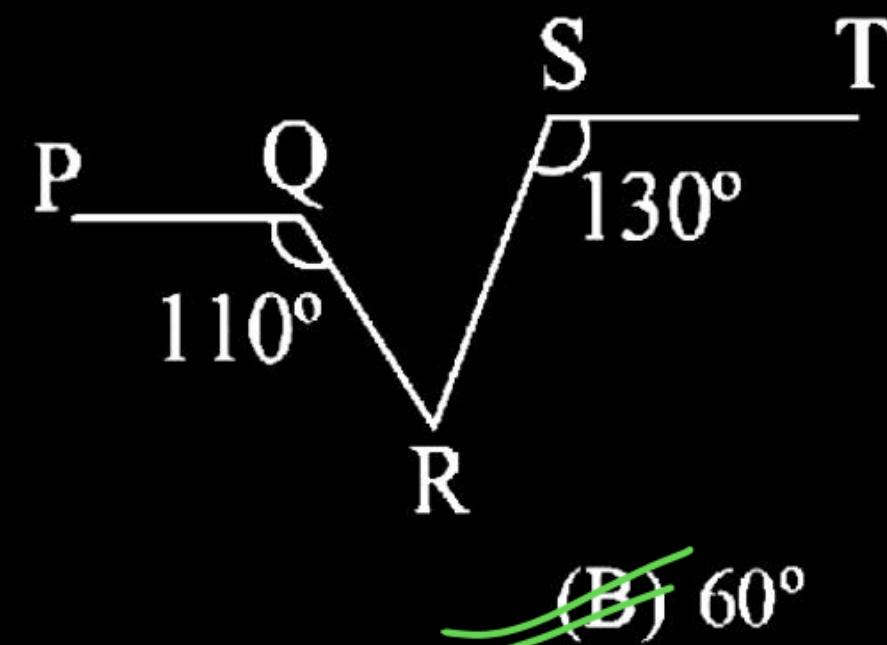
08.

In the fig, if  $PQ \parallel ST$ ,

$\angle PQR = 110^\circ$  and  $\angle RST = 130^\circ$ . Find  $\angle QRS$ ?

नीचे दिए गए चित्र में  $PQ \parallel ST$   $\angle PQR = 110^\circ$  और  
 $\angle RST = 130^\circ$ ,  $\angle QRS$  ज्ञात करें।

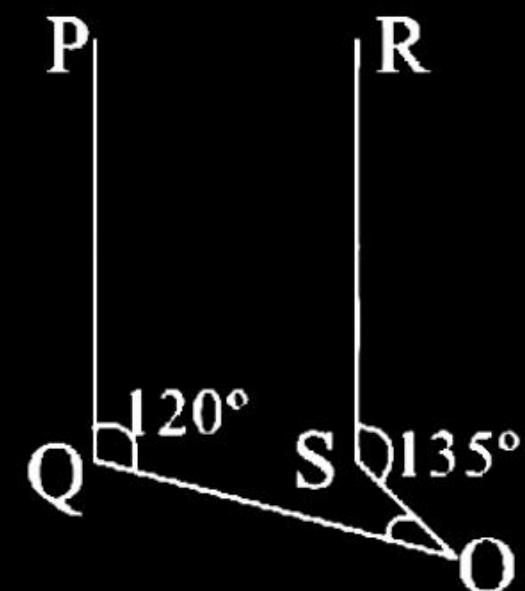
- (A)  $50^\circ$
- (B)  ~~$60^\circ$~~
- (C)  $40^\circ$
- (D)  $45^\circ$



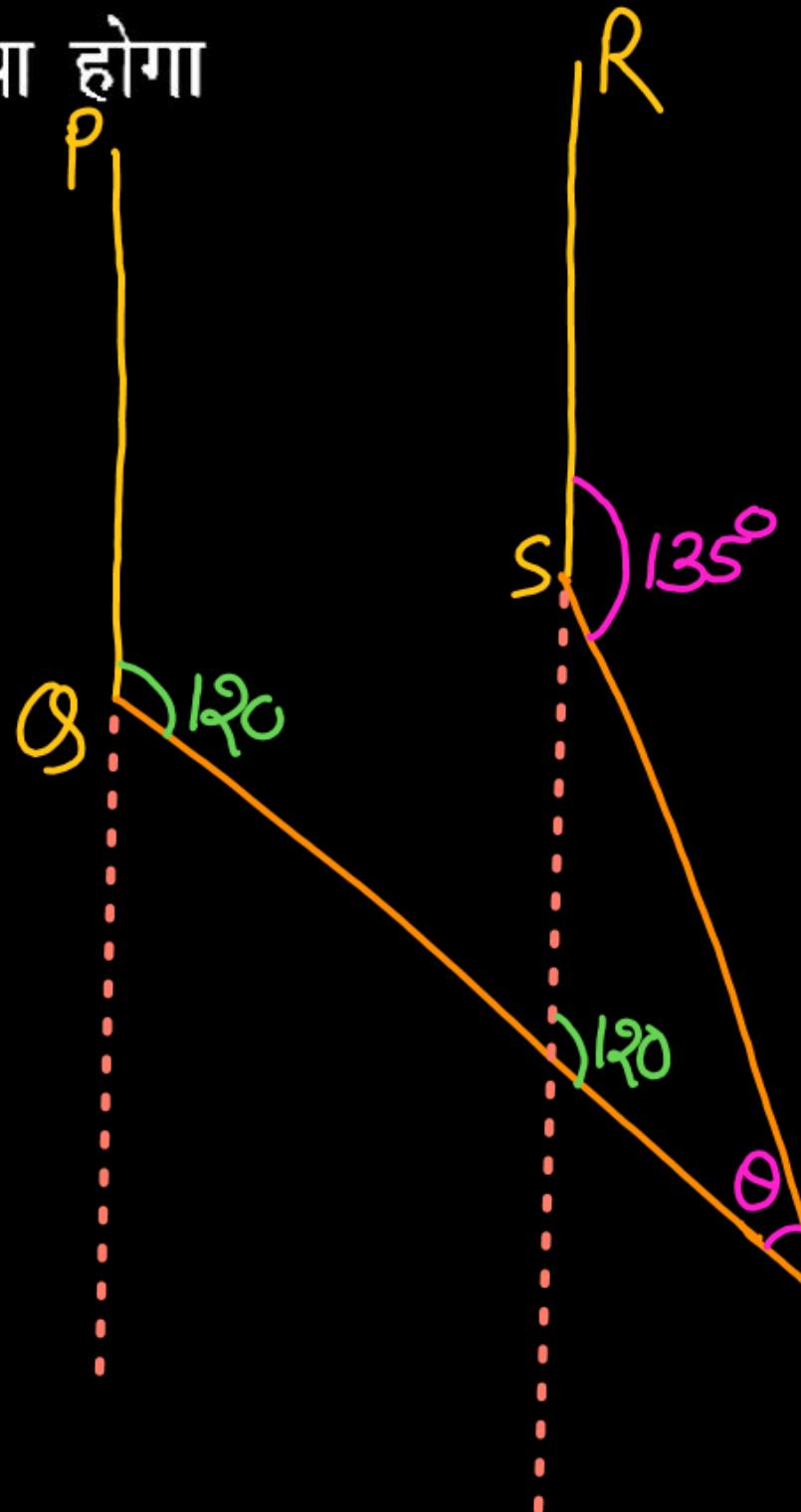
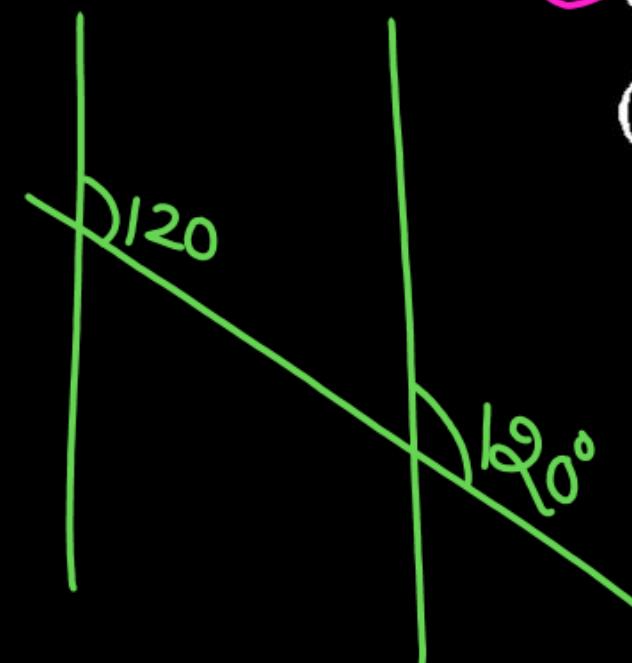
09.

In the given fig  $PQ \parallel RS$ , then find  $\angle QOS$ ?

दिए गए चित्र में  $PQ \parallel RS$ ,  $\angle QOS$ ? का मान क्या होगा



- (A)  $30^\circ$  | (B)  ~~$15^\circ$~~  | (C)  $20^\circ$  | (D)  $10^\circ$



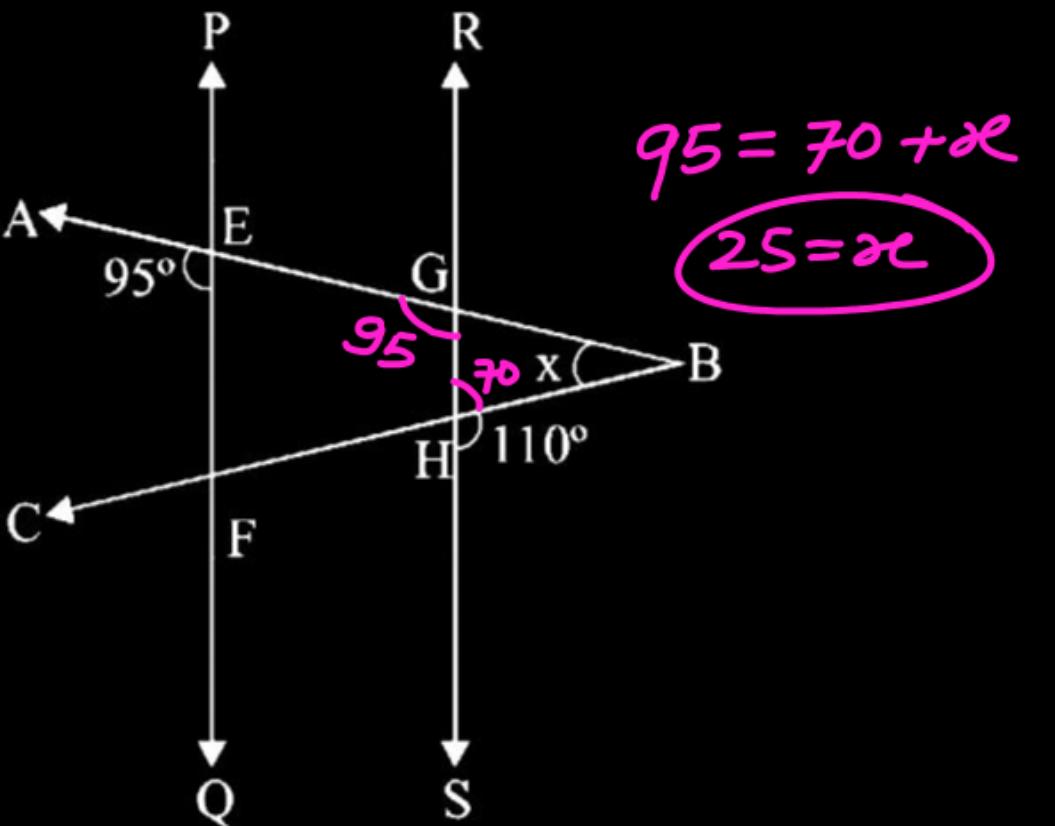
$$120 + \theta = 135$$

$$\theta = 15^\circ$$

10.

In the given figure PQ is parallel to RS,  $\angle AEF=95^\circ$ ,  $\angle BHS=110^\circ$  and  $\angle ABC = x^\circ$ . then, what is the value of x?

दिए गए चित्र में PQ || RS,  $\angle AEF=95^\circ$ ,  $\angle BHS=110^\circ$  और  $\angle ABC = x^\circ$  है। तो फिर x का मान क्या है?

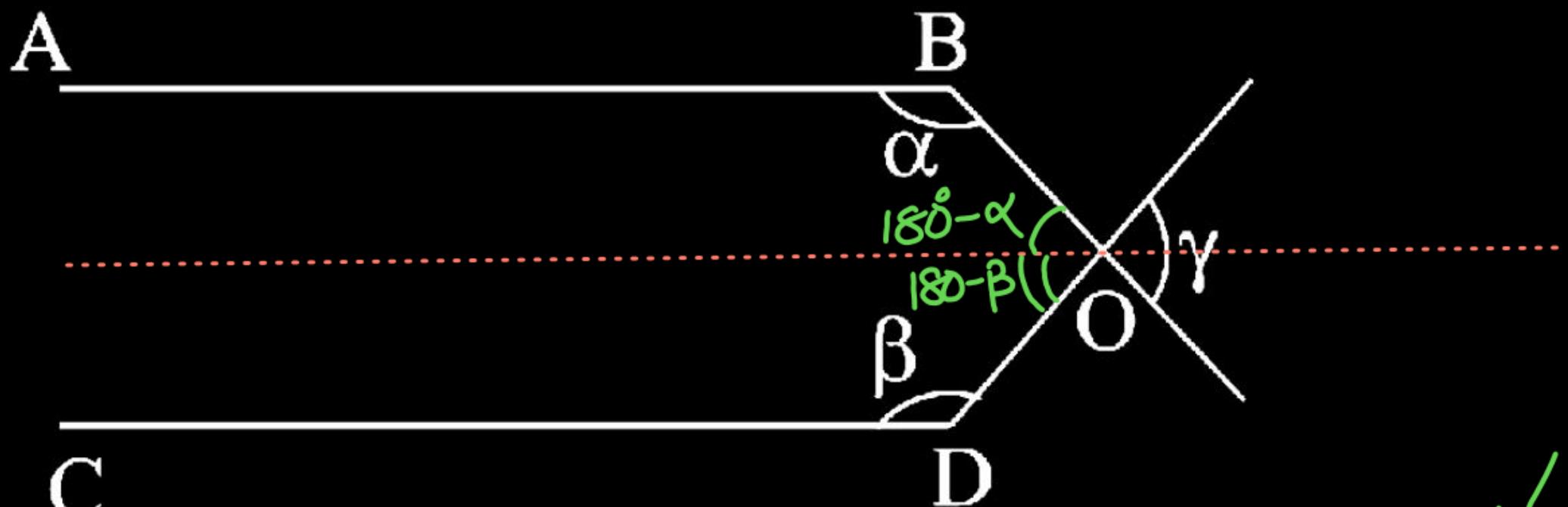


- (A) 15      (B) 25  
(C) 30      (D) 35

11.

If  $AB \parallel CD$  then find the value of  $\alpha + \beta + y$  ?

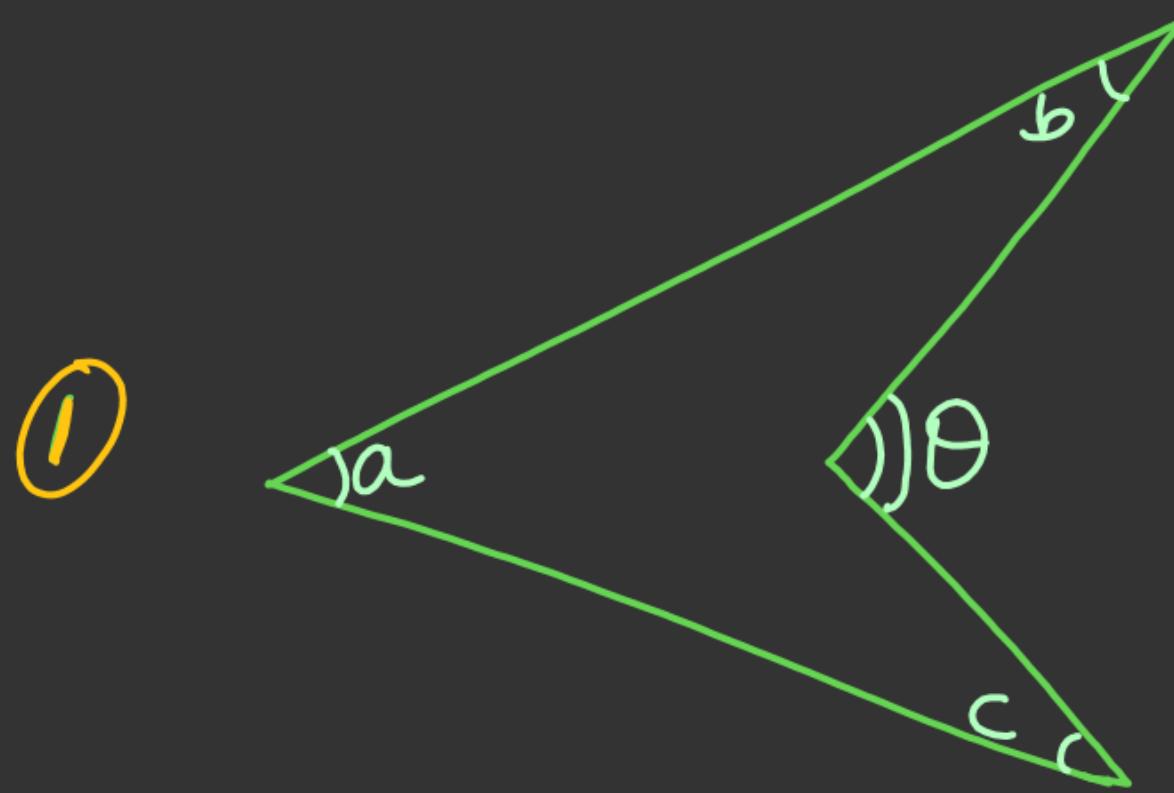
यदि  $AB \parallel CD$  तब  $\alpha + \beta + y$  का मान निकालिये?



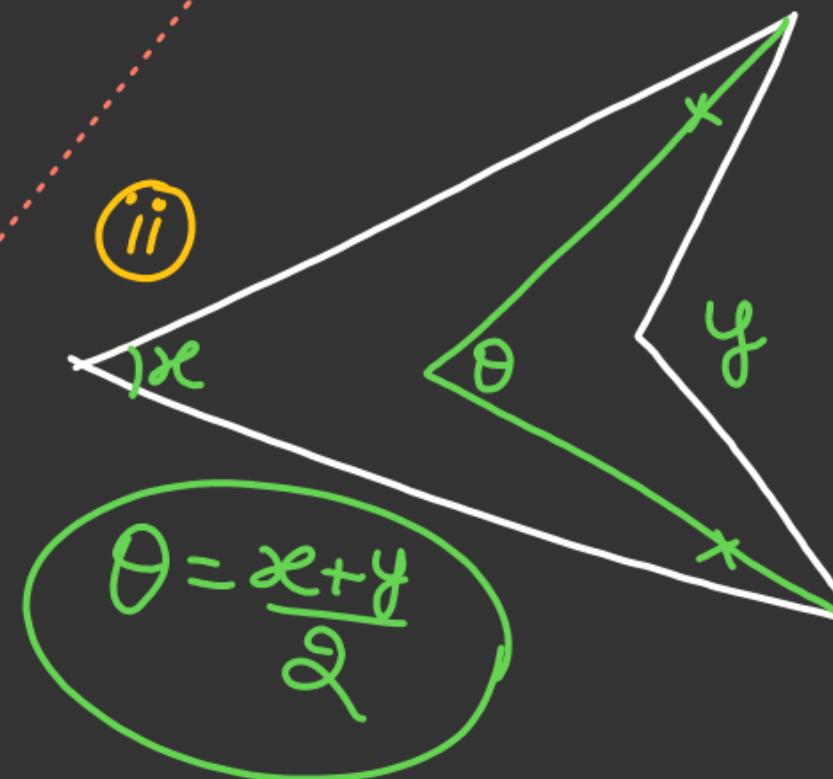
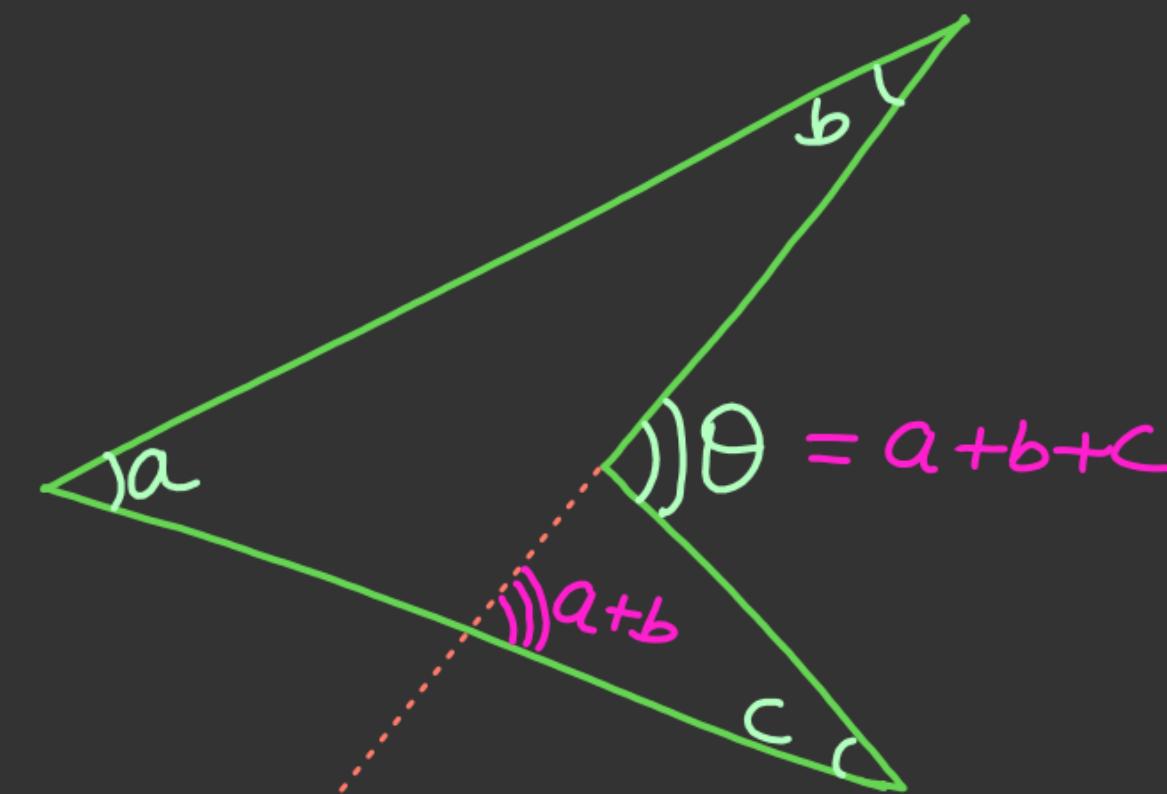
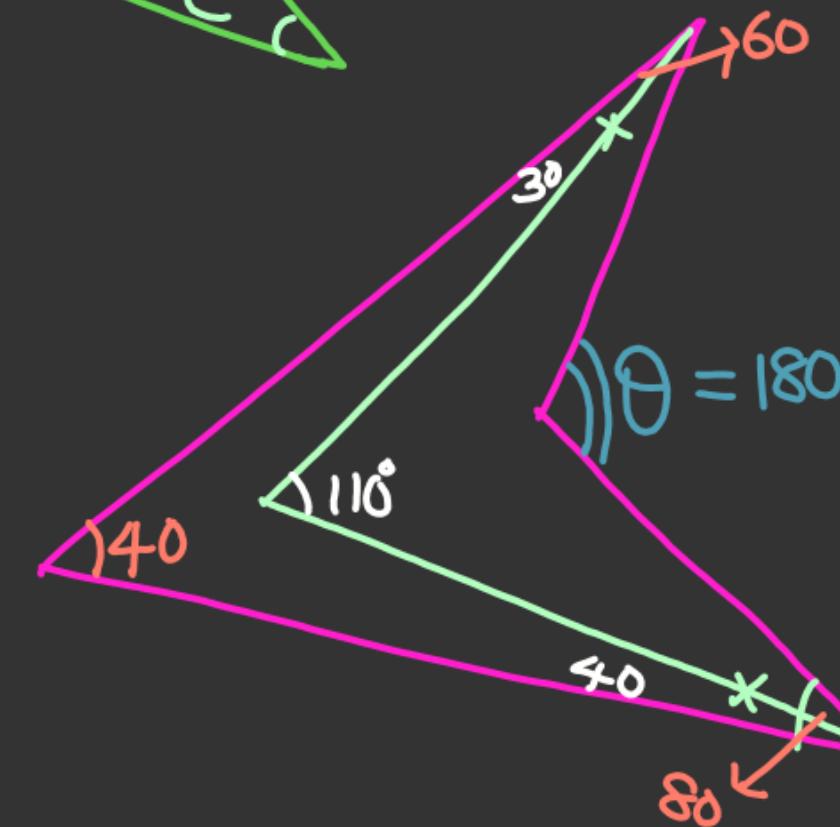
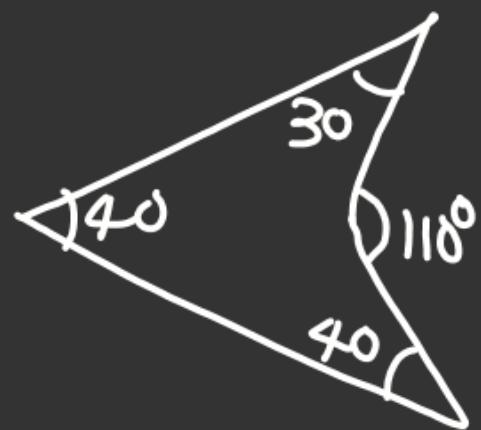
- (A)  $180^\circ$
- ~~(C)  $360^\circ$~~
- (B)  $270^\circ$
- (D)  $240^\circ$

$$180 - \alpha + 180 - \beta = \checkmark$$

$$360 = \alpha + \beta + \checkmark$$



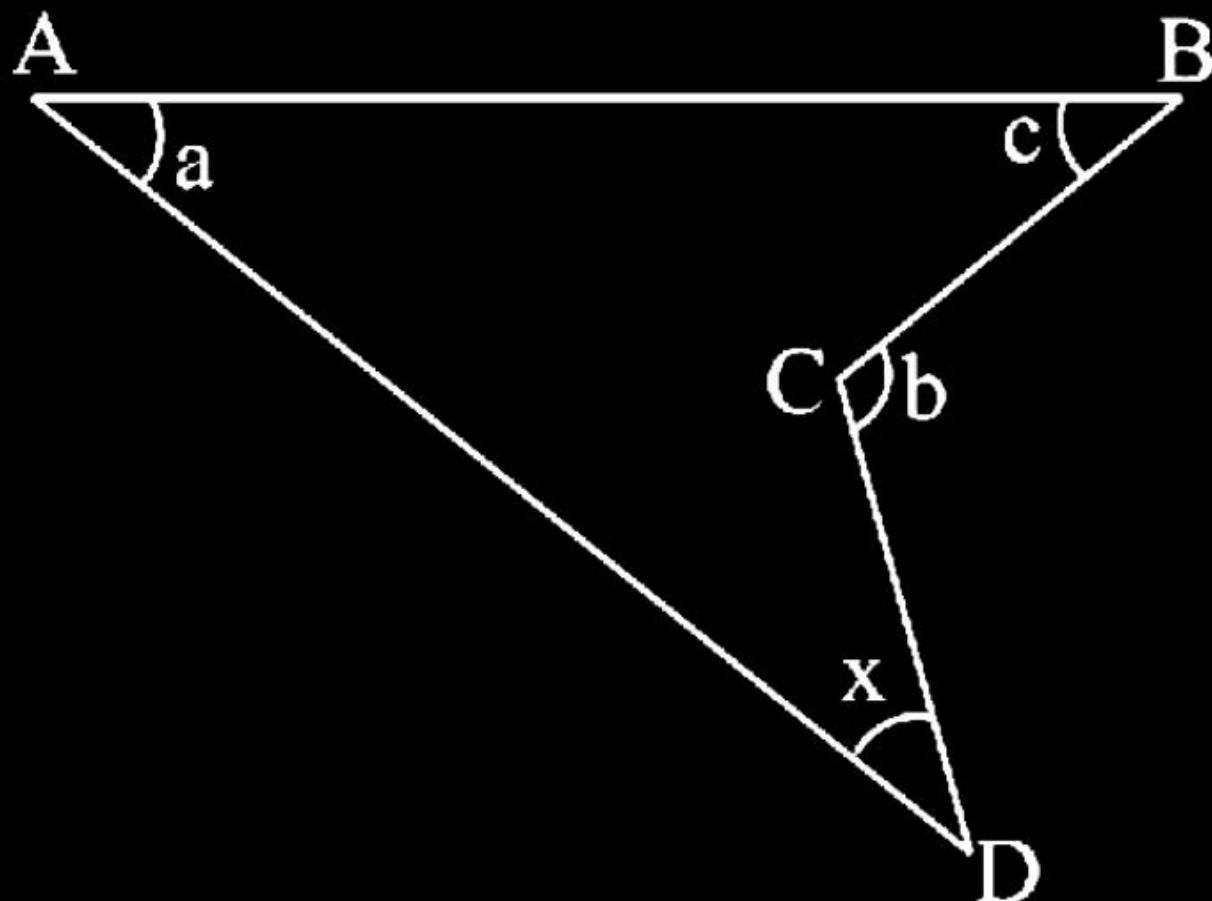
$$\boxed{\theta = \alpha + \beta + \gamma}$$



12.

What is the value of  $x$  in the figure given below ?

नीचे दिए गए चित्र में  $x$  का मान क्या होगा?



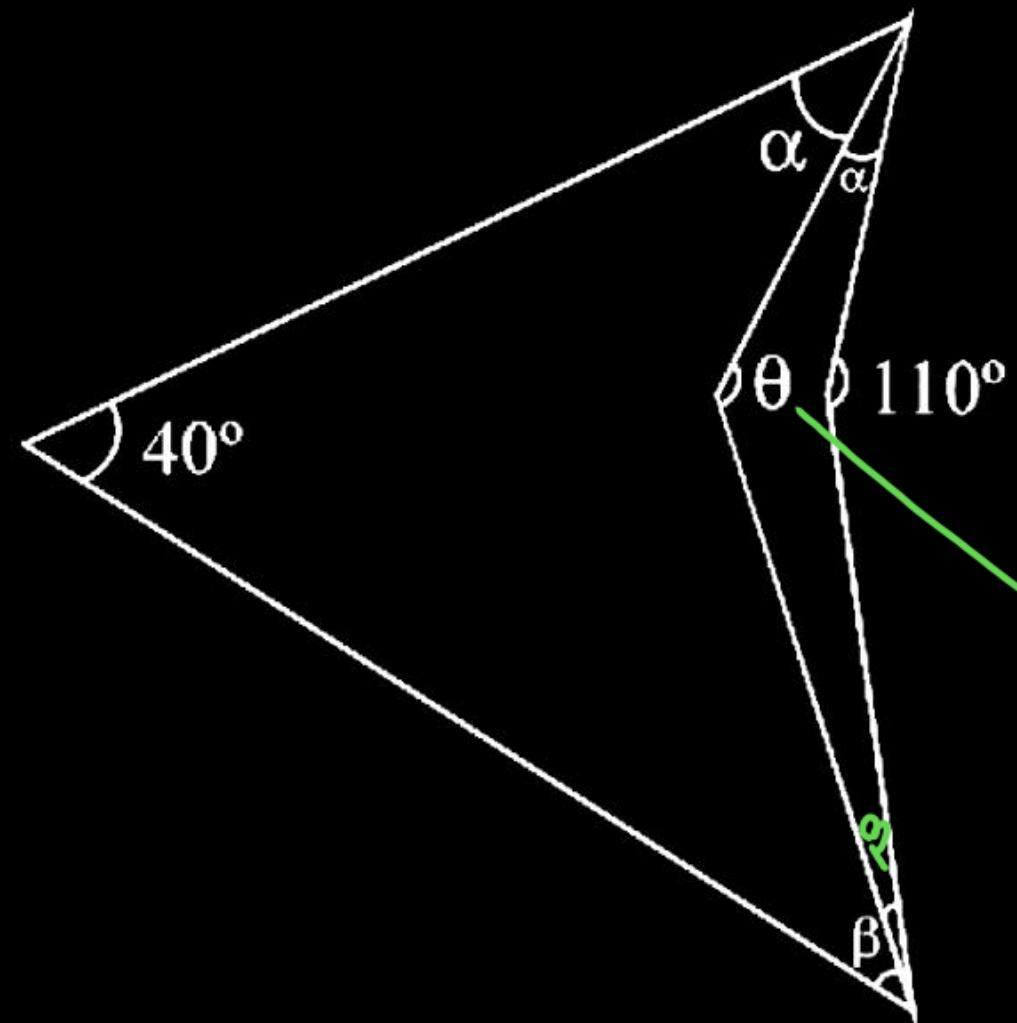
- (A)  $b - a - c$   
(C)  $b + a - c$
- (B)  $b - a + c$   
(D)  $n - (a + b - c)$

$$b = a + c + x$$

$$b - a - c = x$$

13.

Find the value of B?  
B का मान निकालिये



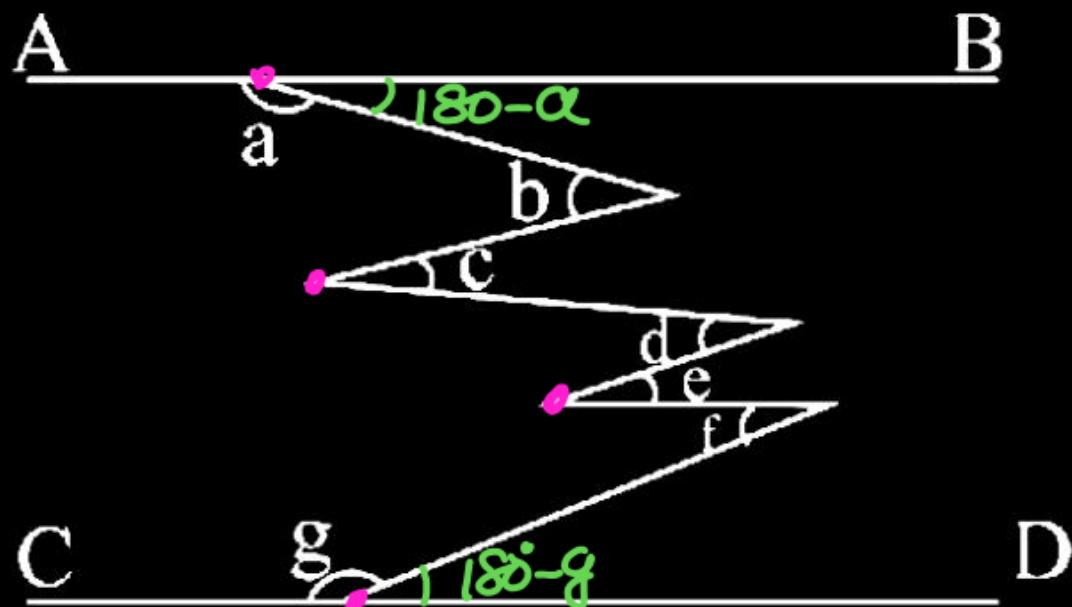
$$\theta = \frac{40 + 110}{2} = \frac{150}{2} = 75^\circ$$

- (A)  $60^\circ$
- (B)  $70^\circ$
- (C)  $75^\circ$
- (D) CND

14.

In the given figure  $AB \parallel CD$  then choose correct one:

दिए गए चित्र में  $AB \parallel CD$  सही संबंध चुने।



$$180 - \alpha + c + e + 180 - g = b + d + f$$

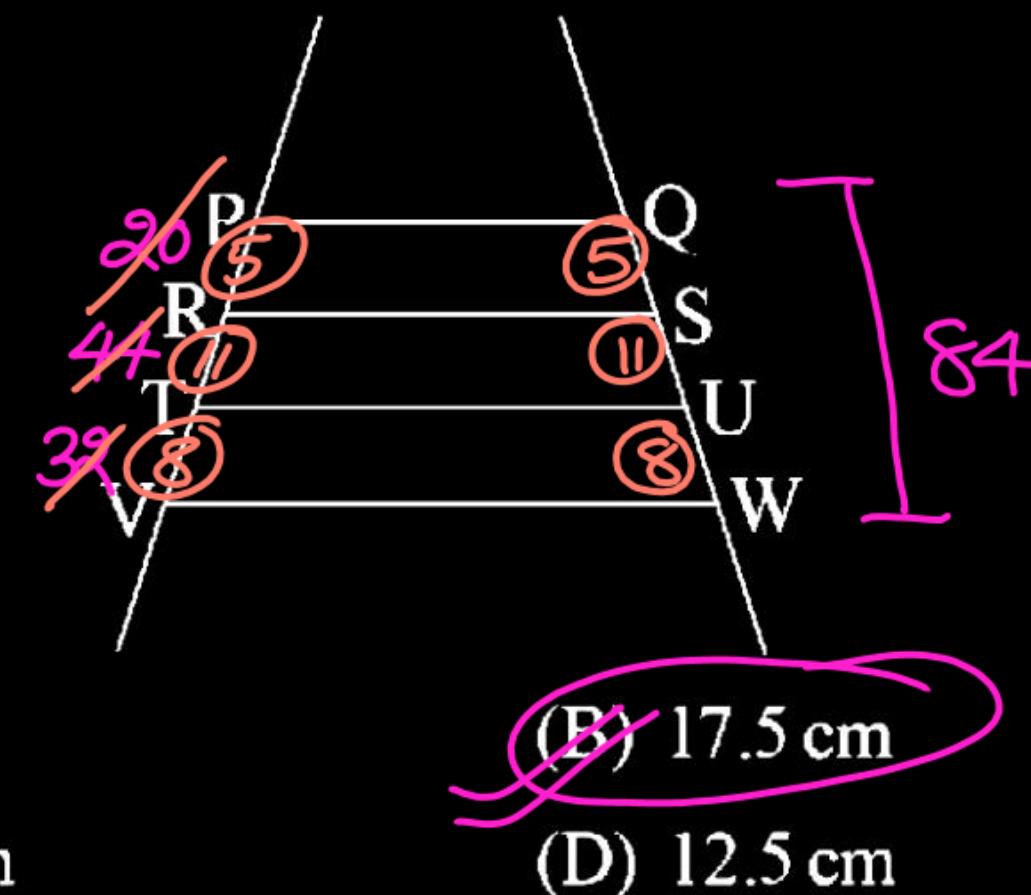
$$360 + c + e = \alpha + b + d + f + g$$

- ~~(A)  $360^\circ + c + e = b + d + f + a + g$~~
- (B)  $a + c + e + g = b + d + f$
- (C)  $180^\circ + b + d + f = a + c + e + g$
- (D) none of these

15.

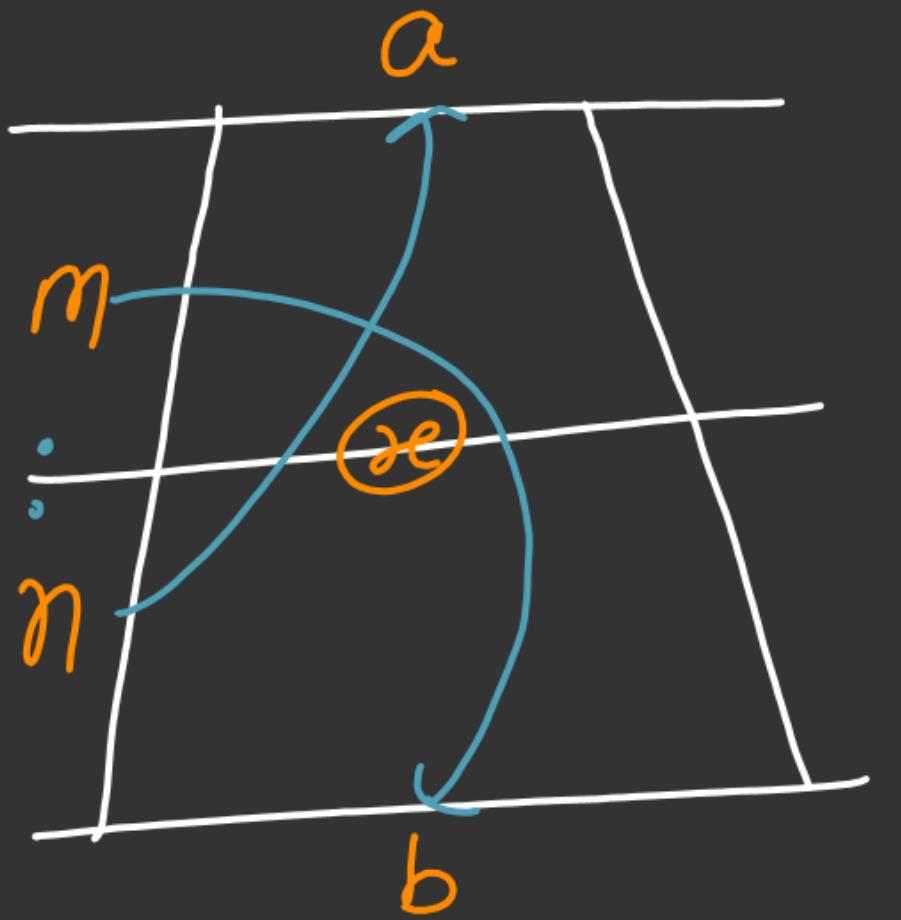
In the figure given below  $PQ \parallel RS \parallel TU \parallel VW$ ,  $PR = 20 \text{ cm}$ ,  $RT = 44 \text{ cm}$ ,  $TV = 32 \text{ cm}$ ,  $QW = 84 \text{ cm}$  then find  $QS$  ?

दिए गए चित्र में  $PQ \parallel RS \parallel TU \parallel VW$ , भुजा  $PR = 20 \text{ cm}$ , भुजा  $RT = 44 \text{ cm}$ , भुजा  $TV = 32 \text{ cm}$ , भुजा  $QW = 84 \text{ cm}$ , भुजा  $QS$  का मान ज्ञात करे।



$$\therefore 24 = 84 \text{ cm}$$

$$\therefore S = \frac{\cancel{84}}{\cancel{24}} \times 5 = \frac{35}{2} = 17.5 \text{ cm}$$

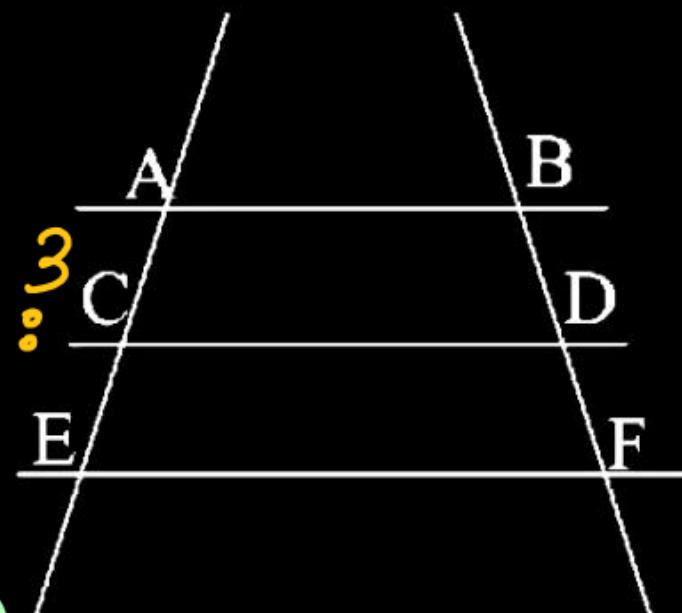


$$\partial e = \frac{mb + na}{m+n}$$

16.

In the given figure below  $AB \parallel CD \parallel EF$ , if  $AB = 29\text{ cm}$ ,  $EF = 57\text{ cm}$ ,  $AC = \frac{3}{4}CE$  and  $BD$  is  $x\text{ cm}$  less than  $DF$  then find  $CD = ?$

नीचे दिए गए चित्र में  $AB \parallel CD \parallel EF$ , यदि भुजा  $AB = 29\text{ cm}$  और भुजा  $EF = 57\text{ cm}$ ,  $AC = \frac{3}{4}CE$  भुजा  $BD$ , भुजा  $DF$  से  $x$  सेमी कम है। तब भुजा  $CD$  का मान क्या होगा?



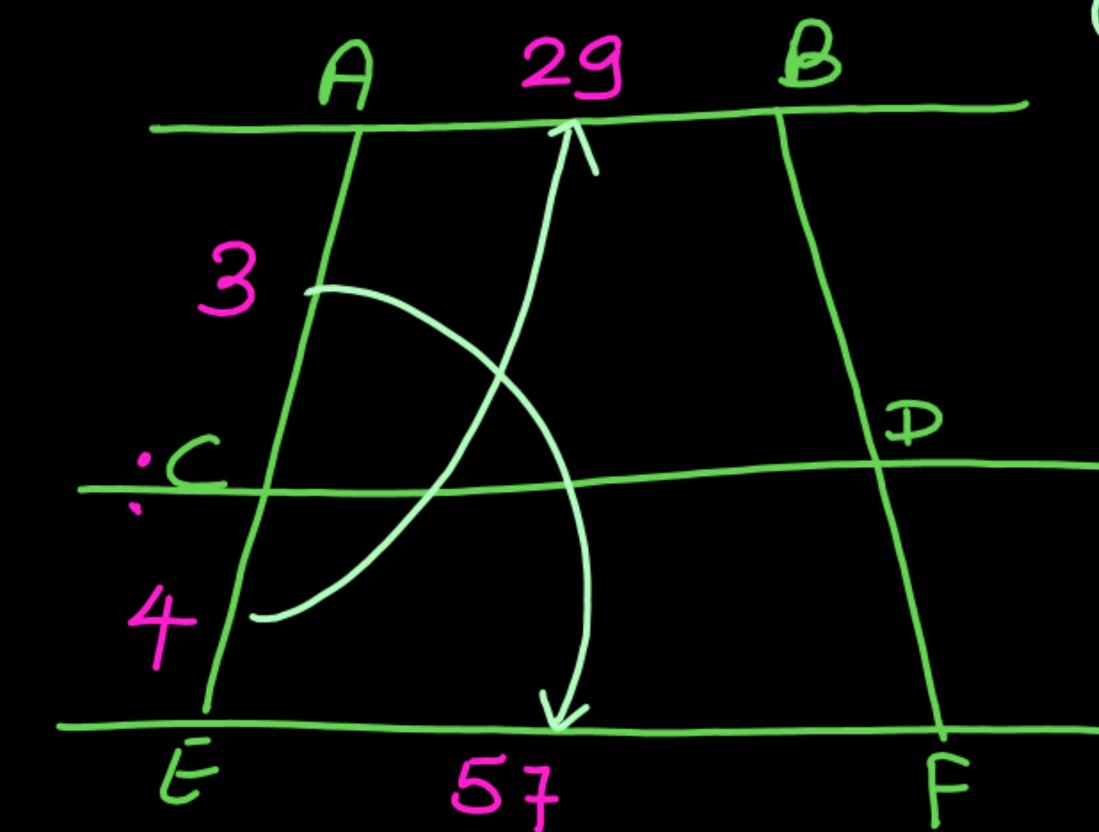
- (A) 41 cm
- (B) 43 cm
- (C) 45 cm
- (D) 40.5 cm

$$AC = \frac{3}{4}CE$$

$$4AC = 3CE$$

$$\boxed{\begin{matrix} AC & : & CE \\ 3 & : & 4 \end{matrix}}$$

$$CD = \frac{4 \times 29 + 3 \times 57}{3 + 4}$$



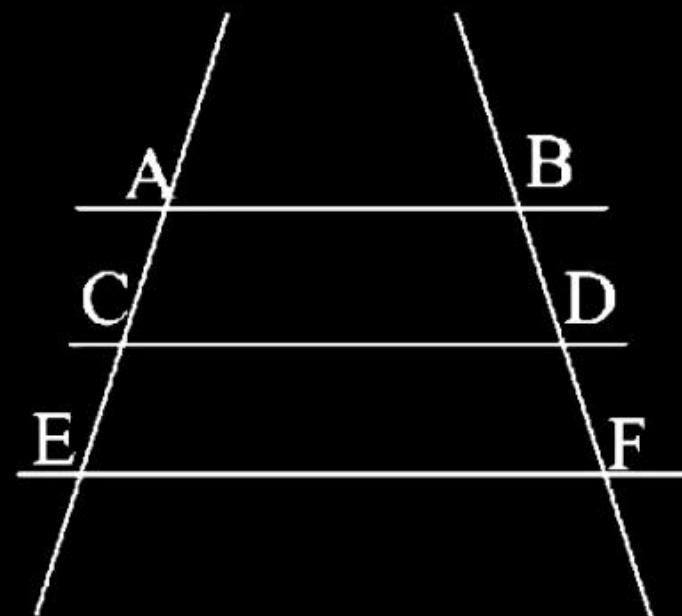
$$CD = \frac{116 + 171}{7}$$

$$CD = \frac{287}{7} = 41$$

16.

In the given figure below  $AB \parallel CD \parallel EF$ , if  $AB = 29\text{ cm}$ ,  $EF = 57\text{ cm}$ ,  $AC = \frac{3}{4}CE$  and  $BD$  is  $x\text{ cm}$  less than  $DF$  then find  $CD = ?$

नीचे दिए गए चित्र में  $AB \parallel CD \parallel EF$ , यदि भुजा  $AB = 29\text{ cm}$  और भुजा  $EF = 57\text{ cm}$ ,  $AC = \frac{3}{4}CE$  भुजा  $BD$ , भुजा  $DF$  से  $x$  सेमी कम है। तब भुजा  $CD$  का मान क्या होगा?



- (A) 41 cm
- (B) 43 cm
- (C) 45 cm
- (D) 40.5 cm

