



CSAT REASONING



BY – SHANTANU SIR

CLOCK -1

By Shantanu rai



TYPE OF QUESTIONS



Find degree



Find Right
angle



Find coincide
time

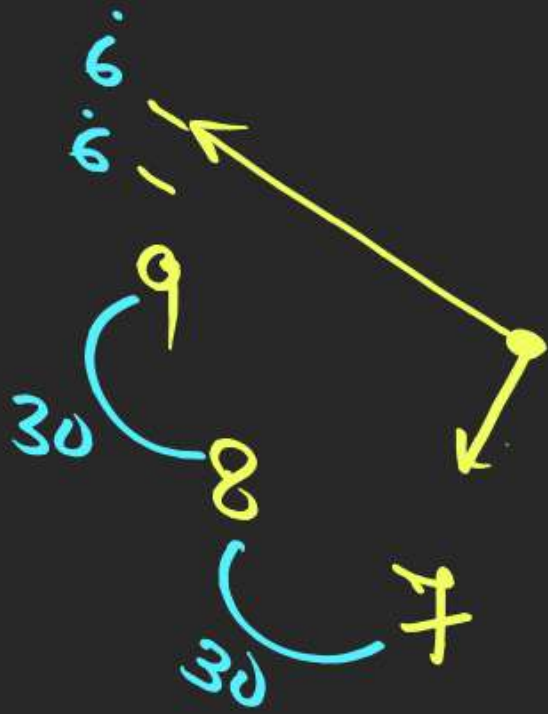


Find opposite
time



Solution.

$$7:47 \quad 23.5^\circ$$



$$\begin{array}{r} 72.0 \\ - 23.5 \\ \hline 48.5^\circ \end{array}$$

✓ Q. Find the internal angle when the time shows 7:47?

किसी घड़ी में यदि 7:47 मिनट हो रहे हैं ,तो उनका अन्तः कोण कितने डिग्री का होगा ?

1) 45.5°

✓ 2) 48.5°

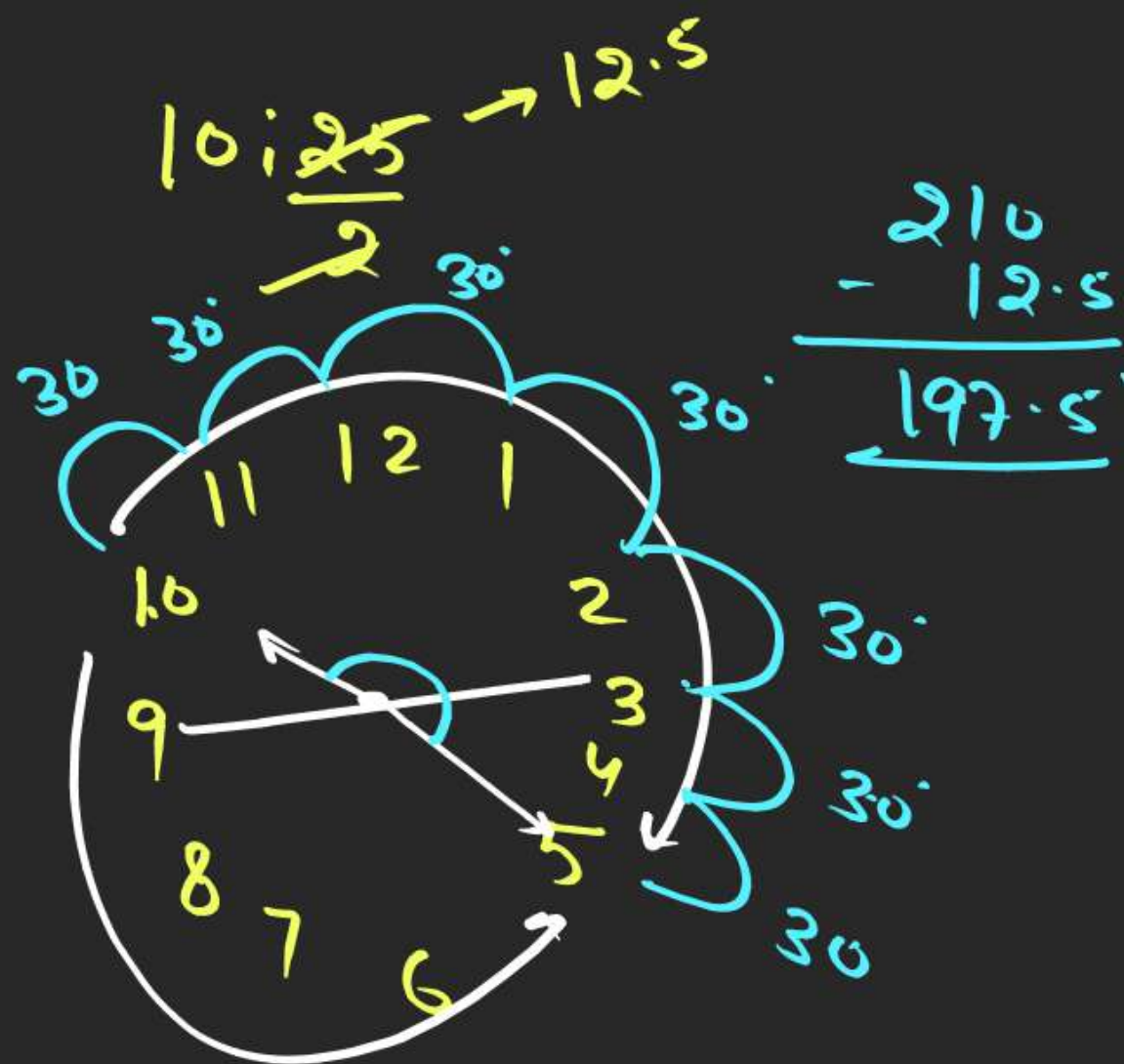
3) 12.5°

4) 17.5°

$$\text{Reflex Angle:} \quad \text{(वाह्य कोण)} = \boxed{360^\circ - \text{Internal Angle.}}$$

Ex 47.

$$\rightarrow \text{वाह्य कोण} = \boxed{360 - 48.5^\circ} \text{ Ans.}$$



Q The reflex angle between the hands of a clock at 10.25 is ?

- 180°
- 192.5°
- 195°
- ✓ 197.5°

Min hand gain how much ~~degree~~ over hour hand

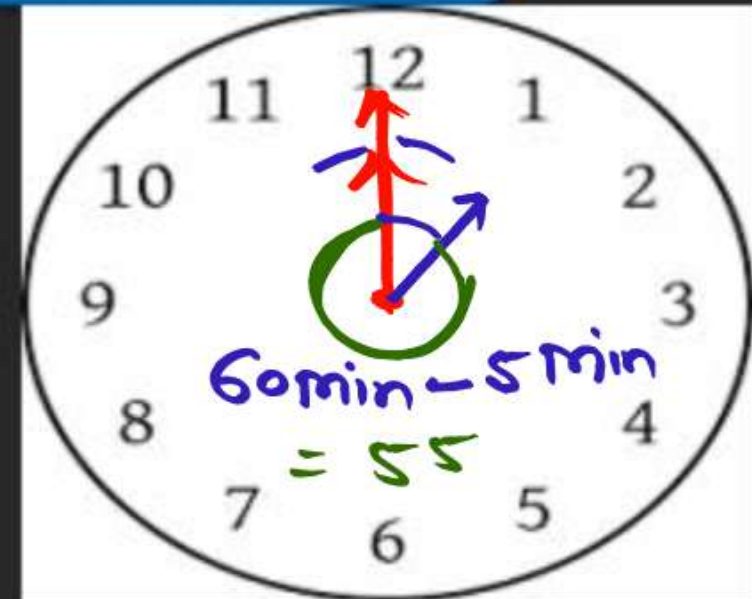
Q. मिनट वाली सुई, घंटे वाली सुई से, 1 Min में कितना मिनट तेज चलती है?

Sol:

$$60 \text{ Min} - 5 \text{ Min} = \underline{55 \text{ Min gain}}$$

$\therefore$ Min Hand 55 Min gain $\longrightarrow$ 60 Min

$$\therefore 1 \text{ Min gain} \longrightarrow \frac{60}{55} \boxed{\frac{12}{11} \text{ min gain}}$$



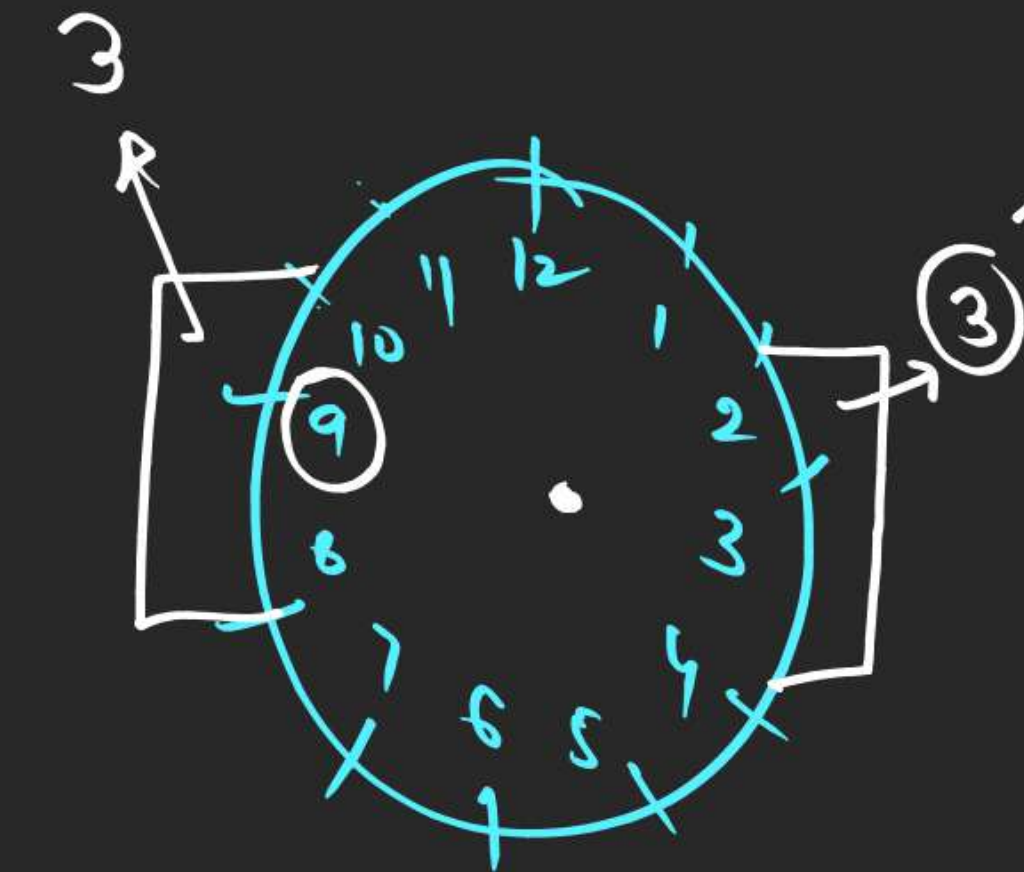
Right Angle (90°)

$\therefore 1 \text{ Hrs} \longrightarrow 2 \text{ R.A.}$

$\therefore 12 \text{ Hrs} \longrightarrow 22 \text{ R.A.}$

$\therefore 24 \text{ Hrs} \longrightarrow 44 \text{ R.A.}$

"When Both Hands are 15 Min. apart from each other Then They make Exctly right angle."



$\begin{array}{c} 2+4 \\ \swarrow \quad \searrow \\ 2+3 \quad 3+4 \end{array}$

1. 2:25 (Approx)	1. <u>3:00</u>
2. 3:00	2. 3:30 (Approx)

"जब दोनों सुइयों के बीच का अंतर 15 min हों।"

I to 8 → Ist

Q. At what time between 5 to 6 when both hands make Second right angle?

5 और 6 के बीच किस समय घड़ी की सुइयां दूसरा समकोण बनाएंगी?

- a) 43 5\11 min past 5
- ✓ b) 43 7\11 min past 5
- c) 40 min. past 5
- d) 45 min. past 5

5 to ~~6~~ → 2nd

40 min. × $\frac{12}{11}$

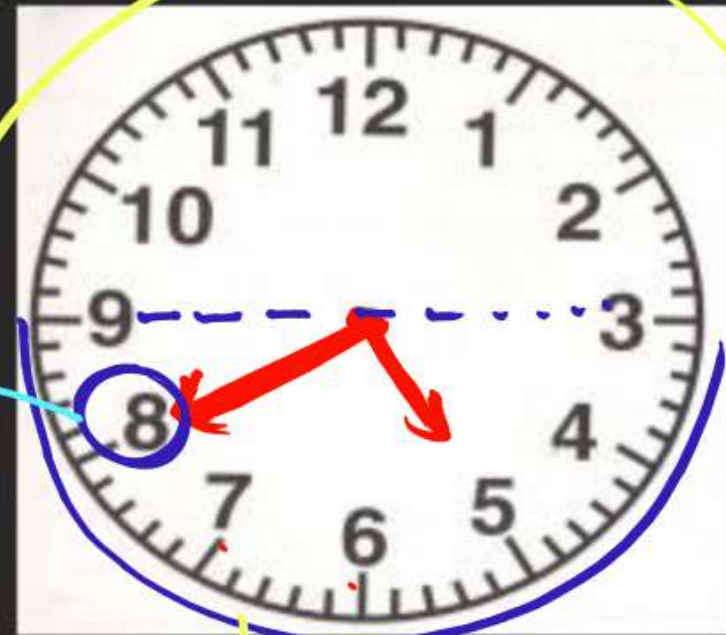
∴ 1 min gain → $\frac{12}{11}$ min

∴ 40 min gain → $\frac{12}{11} \times 40$

= $\frac{480}{11}$

43 $\frac{7}{11}$

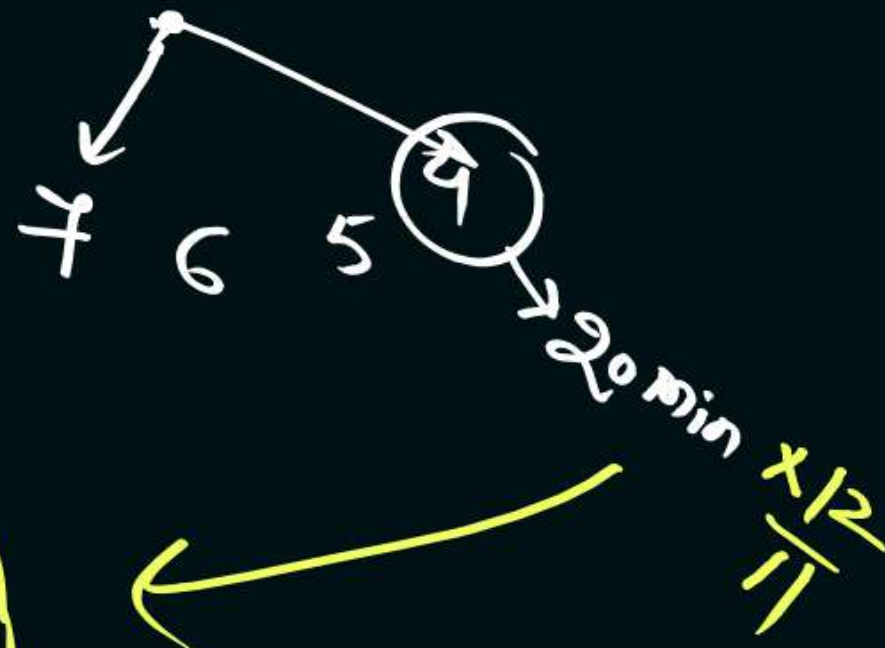
11) 480 (43)
44
40
40
7



Ist → 15 min पीछे
2nd → 15 min आगे

7 to ~~8~~ $\rightarrow I^{st}$

7: 21 $\frac{9}{11}$



21 $\frac{9}{11}$

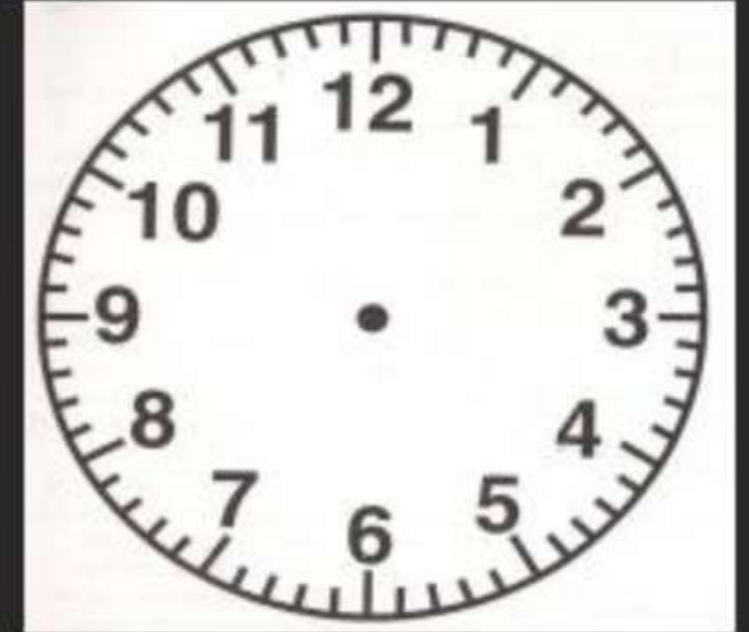
Q. At what time between 4 to 5 when both hands make first right angle?

4 और 5 के बीच किस समय घड़ी की सुइयां पहला समकोण बनाएंगी?

- a) 43 5\11 min past 4
- b) 5 5\11 min past 4
- c) 40 min. past 4
- d) 38 2\11 min. past 4

4 to ~~5~~ → I.

$$\begin{array}{c} \textcircled{1} \\ \swarrow \\ 2 \\ \searrow \\ 3 \\ \searrow \\ 4 \end{array} \rightarrow 5 \times \frac{12}{11} = \textcircled{5 \frac{5}{11}}$$



.Q. At what time between 1 to 2 when both hands make 2nd right angle?

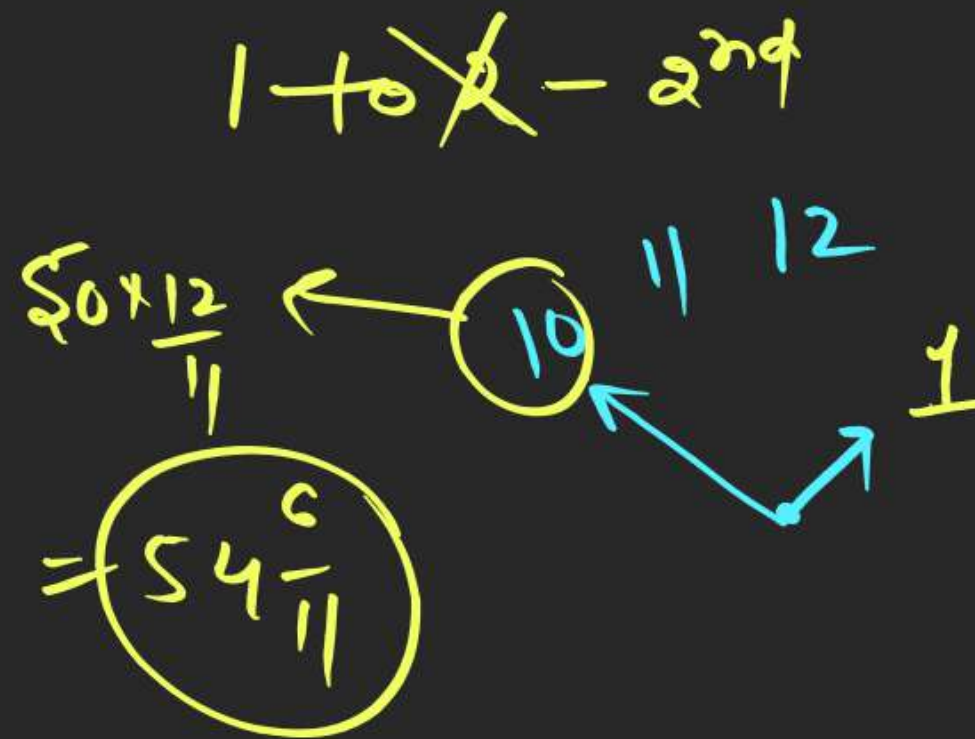
1 और 2 के बीच किस समय घड़ी की सुइयां 2nd समकोण बनाएंगी?

a) 54 5\11 min past 1

b) 54 6\11 min past 1 ✓

c) 21 9\11. past 1

d) 38 2\11 min. past 1



2nd → 15 ओजे
↓
15 मिनट

Coincide Time (०.)

(सम्याती समय)



1 Hrs $\longrightarrow$ 1 Time

12 Hrs $\longrightarrow$ 11 Time. (11 to 12)

24 Hrs $\longrightarrow$ 22 Time.

Solution.

6 to ~~7~~ $\rightarrow$ 0

$$\begin{array}{r} \downarrow \\ 6 \\ \downarrow \\ 30 \times 12 \\ \hline 11 \\ = 32 \frac{8}{11} \end{array}$$

Q. at what time between 6 to 7 when both hands make coincide to each other

6 से 7 के बीच किस समय जब दोनों सुइयां एक दूसरे से संपाती हों?

a) 38 $\frac{2}{11}$ min past 6

✓ b) 32 $\frac{8}{11}$ min past 6

c) 32 $\frac{8}{11}$ min past 7

d) 38 $\frac{8}{11}$ min past 6

Q. at what time between 6 to 7 when both hands make coincide to each other

6 से 7 के बीच किस समय जब दोनों सुइयां एक दूसरे से संपाती हों?

a) 38 2\11 min past 6

b) 32 8\11 min past 6

c) 32 8\11 min past 7

d) 38 8\11 min past 6

9 to 10

$$45 \times \frac{12}{11} \leftarrow 9 \leftarrow$$
$$= 49 \frac{1}{11}$$

Q. at what time between 9 to 10 when both hands make coincide to each other
9 से 10 के बीच किस समय जब दोनों सुइयां एक दूसरे से संपाती हों?

a) 54 $\frac{2}{11}$ min past 9

b) 54 $\frac{6}{11}$ min past 9

c) 43 $\frac{7}{11}$ min past 8

d) 38 $\frac{8}{11}$ min past 9

✓ e) 49 $\frac{1}{11}$ Min Past 9

Homework

Q. at what time between 11 to 12 when both hands make coincide to each other

11 से 12 के बीच किस समय जब दोनों सुइयां एक दूसरे से संपाती हों?

a) 54 2\11 min past 11

b) 54 6\11 min past 11

☒ c) 12:00

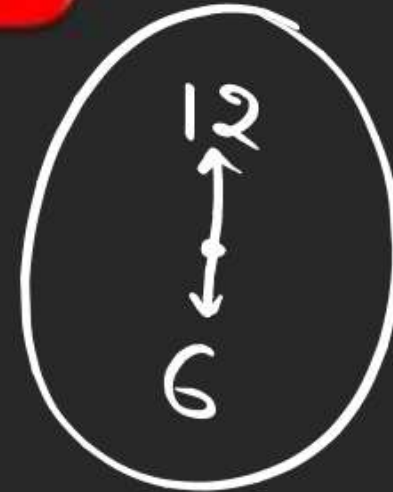
d) 38 8\11 min past 11

Opposite time (180°)

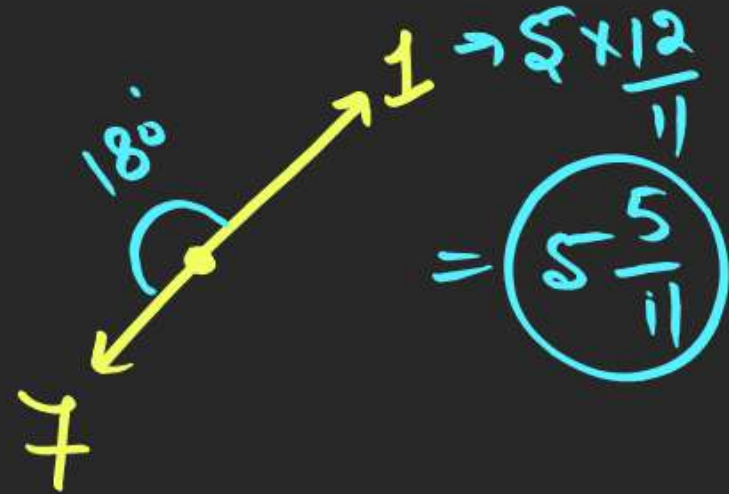
1 Hrs $\longrightarrow$ 1 Time

12 Hrs $\longrightarrow$ 11 Time (5 to 6)

24 Hrs $\longrightarrow$ 22 Time.



7 to ~~8~~ $\rightarrow 180^\circ$



Q. At what time between 7 to 8 when both hands will opposite to each other?

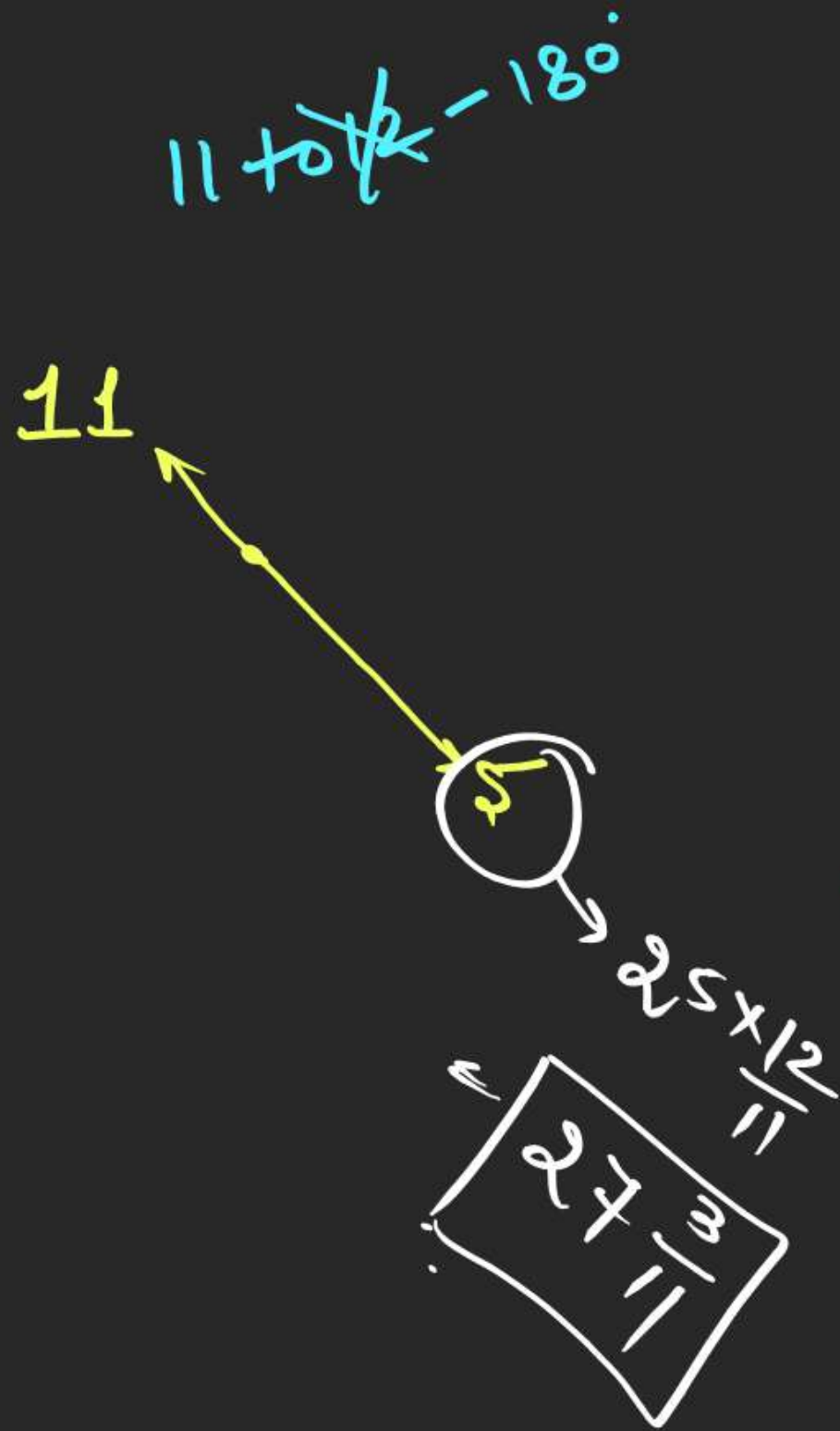
7 से 8 के बीच किस समय दोनों हाथ एक दूसरे के विपरीत होंगे?

✓ a) 7 : 5 $5 \frac{5}{11}$ min

B) 7 : 10 $5 \frac{5}{11}$ min

c) 7 : 16 $4 \frac{4}{11}$ min

d) 7 : 5 $6 \frac{6}{11}$ min



Q. At what time between 11 to 12 when both hands will opposite to each other?

11 से 12 के बीच किस समय दोनों हाथ एक दूसरे के विपरीत होंगे?

- a) 11 : 21 5\11 min
- B) 11 : 21 9\11 min
- ✓ c) 11 : 27 3\11 min
- d) 11 : 54 6\11 min

Homework

Q. At what time between 8 to 9 when both hands will opposite to each other?

8 से 9 के बीच किस समय दोनों हाथ एक दूसरे के विपरीत होंगे?

- a) 8 : 10 9\11 min
- B) 8 : 10 10\11 min
- c) 9 : 16 3\11 min
- d) 8 : 14 6\11 min

