

CLOCK

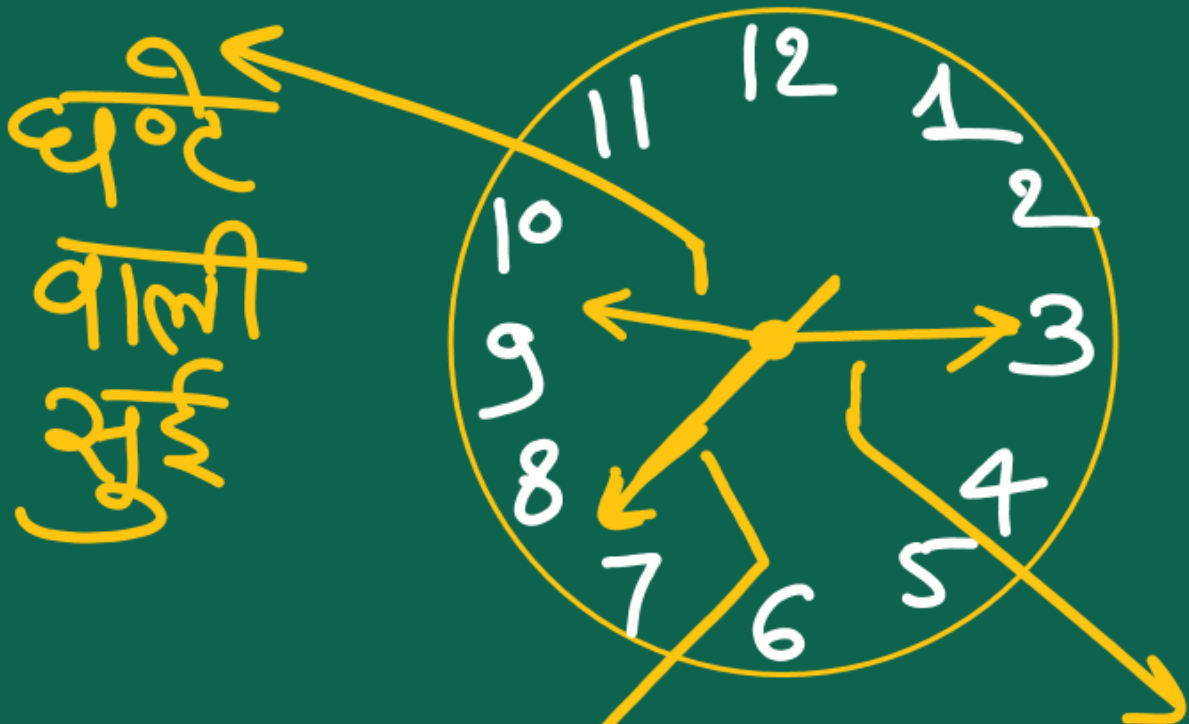
ए.डी.



Part-1



Hour Hand
Analog Clock



H	m	s
11	10	32

Second Hand
सेकंड्स वाली सुई

Minute Hand
मिनट वाली सुई

Digital Clock

Basic Concept

Minute Hand
मिनट वाली सुई

1 घंटे = 1 पुरा चक्कर

60 मिनट = 360° का कोण

$$1 \text{ मिनट} = \frac{360}{60}$$

$$1 \text{ Min} = 6^\circ \text{ कोण}$$

Hour Hand
घंटे वाली सुई

12 घंटे = 1 पुरा चक्कर

$$12 \times 60 \text{ Min.} = 360^\circ$$

$$720 \text{ Min.} = 360^\circ$$

$$1 \text{ Min} = \frac{360}{720}$$

$$1 \text{ Min.} = \frac{1^\circ}{2}$$

Second Hand
सेकंड वाली सुई

1 Min. = 1 पुरा चक्कर

$$60 \text{ Sec.} = 360^\circ$$

$$1 \text{ Sec.} = \frac{360}{60}$$

$$1 \text{ Sec.} = 6^\circ$$

Find Angle when time given #
कोण ज्ञात करना जब समय दिया हो #

Q. 3:40 पर घड़ी के घंटे और मिनट की सुई के बीच में कितने डिग्री का कोण बनेगा?

Find the angle b/w Hour & Minute Hand at 3:40.

$$\text{कोण} = \frac{11}{2} \times \text{मिनट} - 30 \times \text{घंटा}$$

$$\theta = \frac{11}{2} \times m - 30 \times H$$

$$\begin{array}{c} 3:40 \\ H \quad m \end{array} \Rightarrow \theta = \frac{11}{2} \times 40 - 30 \times 3$$
$$220 - 90 = 130$$

Practically

$$360^\circ - 130^\circ = 230^\circ$$

3:40



+ve कोण

130°

$$\theta_1 = \frac{11}{2} \times \text{Min.} - 30 \times \text{Hour}$$

$$\theta_2 = 360 - \theta_1$$

Q. 5:10 पर दोनों सुइयों के बीच का कोण ज्ञात करो।

Find the angle b/w both the hands at 5:10.

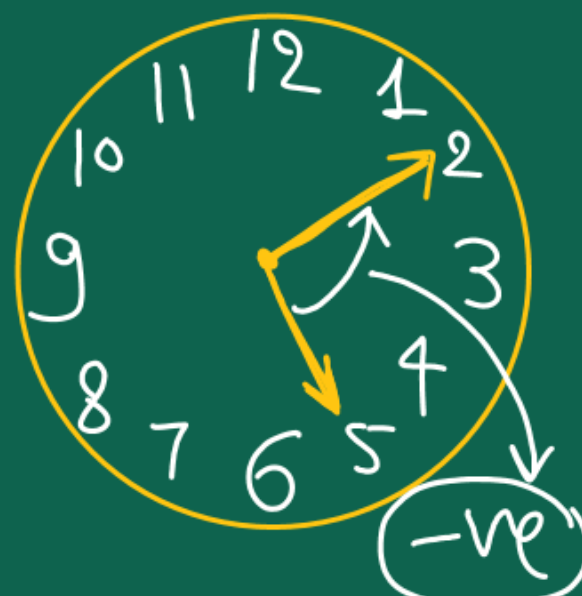
5:10
H M

$$\theta_1 = \frac{11}{2} \times M - 30 \times H$$

$$\theta_1 = \frac{11}{2} \times 10 - 30 \times 5$$

$$\theta_1 = 55 - 150$$

$$\theta_1 = -95^\circ$$



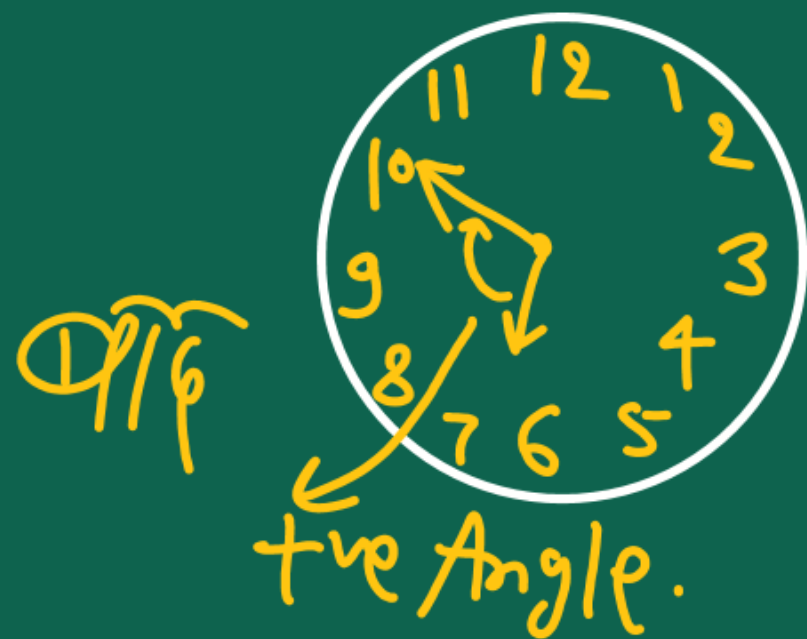
-ve

Q. 6:50 → कोण?

$$\theta = \frac{11}{2} \times \text{Min.} - 30 \times H$$

$$\theta = \frac{11}{2} \times 50 - 30 \times 6$$

$$275^\circ - 180^\circ = +95^\circ$$

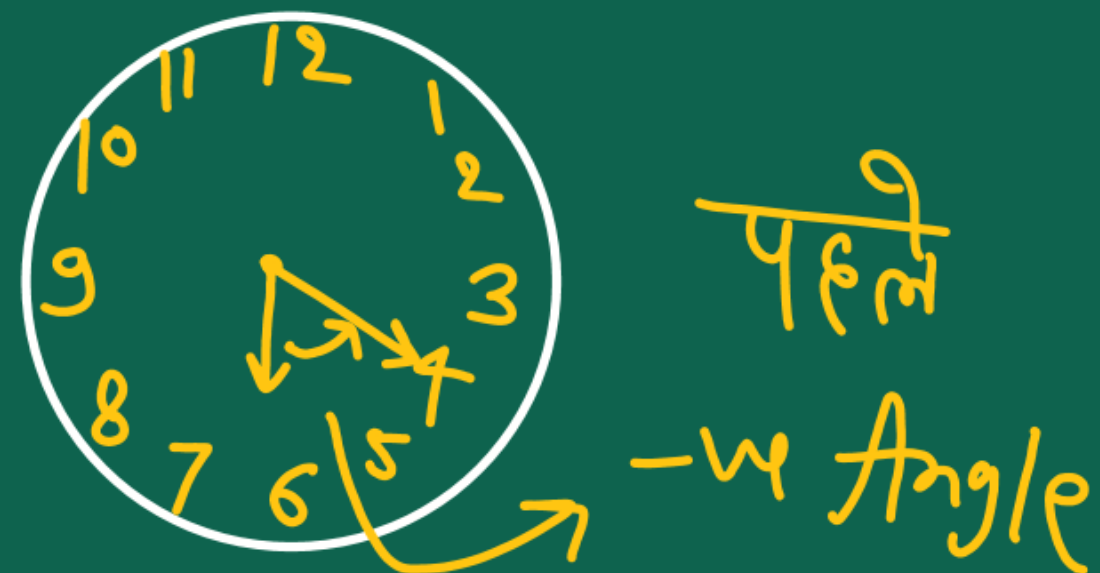


Q. 6:20 → कोण?

$$\theta_1 = \frac{11}{2} \times \text{Min.} - 30 \times H$$

$$\theta_1 = \frac{11}{2} \times 20 - 30 \times 6$$

$$\theta_1 = 110^\circ - 180^\circ = -70^\circ$$



Q. ^{00:20}
 $12:20$ पर कोण ज्ञात करो?
 Find angle at $12:20$

$$\theta_1 = \frac{11}{2} \times \text{Min} - 30 \times H$$

$$\theta_1 = \frac{11}{2} \times \overset{10}{\cancel{20}} - 30 \times 12$$

$$= 110^\circ - 360^\circ$$

$$= -250^\circ$$



★ $\boxed{00:20}$
 $\quad \quad H \quad \quad m$

$$\begin{aligned} \theta_1 &= \frac{11}{2} \times 20 - 30 \times 0 \\ &= 110^\circ - 0 = 110^\circ \text{ Ans} \end{aligned}$$

Thank You

~ Keep Smile Always

