AFCAT 1 2025

MATHS

CLOCKS

MCQS

NAVJYOTI SIR

10 Feb 2025 Live Classes Schedule

9:00AM	10 FEBRUARY 2025 DAILY DEFENCE UPDATES	DIVYANSHU SIR
10:00AM	10 FEBRUARY 2025 DAILY CURRENT AFFAIRS	RUBY MA'AM

SSB INTERVIEW LIVE CLASSES

9:30AM	OVERVIEW OF TAT & WAT	ANURADHA MA'AM

AFCAT 1 2025 LIVE CLASSES

3:00PM	STATIC GK - NATIONAL & INTL ORG & HQ	DIVYANSHU SIR
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 2	ANURADHA MA'AM
5:30PM	MATHS - CLOCKS	NAVJYOTI SIR

NDA 1 2025 LIVE CLASSES

10:00AM	MATHS - MATRICES & DETERMINANTS - CLASS 1	NAVJYOTI SIR
11:30AM	POLITY - CLASS 3	RUBY MA'AM
1:00PM	BIOLOGY - CLASS 1	SHIVANGI MA'AM
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 2	ANURADHA MA'AM

CDS 1 2025 LIVE CLASSES

11:30AM	POLITY - CLASS 3	RUBY MA'AM
1:00PM	BIOLOGY - CLASS 1	SHIVANGI MA'AM
4:30PM	ENGLISH - FILL IN THE BLANKS - CLASS 2	ANURADHA MA'AM

CLOCKS - MCQs

At what time between 3 and 4 o' clock , the hands of the clock coincide (approx.) ?

A. 3:30

B. 4:05

C. 3:16

D. None of the above

$$\theta = \frac{11m - 60h}{2}$$

$m \rightarrow$ minutes

$h \rightarrow$ hours

$$0^\circ = \frac{11m - 60 \times 3}{2}$$

$\theta \rightarrow$ angle between hour and middle hand

$$11m = 180^\circ$$

$$m = \frac{180^\circ}{11} = 16.36 \sim 16 \text{ minutes}$$

3:16

At what time between 3 and 4 o’ clock , the hands of the clock coincide (approx.) ?

A. 3:30

B. 4:05

C. 3:16

D. None of the above

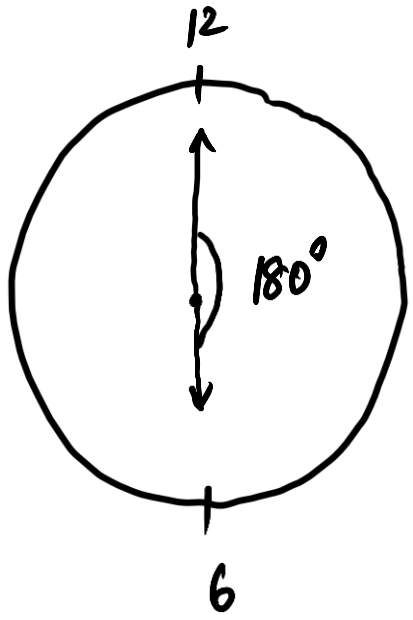
At what time between 5 and 6 PM , the hands of the clock will be in opposite side ?

A. 6:15 PM

B. 5:30 PM

C. 5:45 PM

D. 6 PM



At what time between 5 and 6 PM , the hands of the clock will be in opposite side ?

A. 6:15 PM

B. 5:30 PM

C. 5:45 PM

D. 6 PM

At what time (approx.) between 7 and 8 o' clock , the hands of the clock will be in opposite side ?

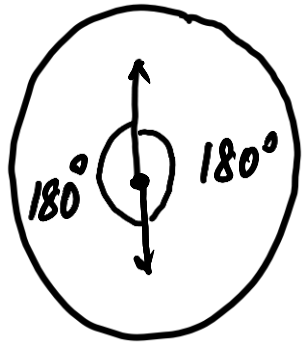
A. 7:05

B. 7:30

C. 7:45

D. None of the above

$$\theta = \frac{11m - 60h}{2}$$



$$\pm 180^\circ = \frac{11m - 60h}{2}$$

$$\pm 360^\circ + 60h = 11m$$

$$m = \frac{1}{11} \times 60 \left(h \pm 6\right)$$

$$m = \frac{1}{11} \times 60 \left(h \pm 6\right)$$

$$m = \frac{60}{11}\left(7 - 6\right)$$

$$= \frac{60}{11} = 5.4 \sim 5 \text{ minutes}$$

6 to 12 ⟶ (−)

12 to 6 ⟶ (+)

7 o' clock + 5 minutes ⟶ 7:05

At what time (approx.) between 7 and 8 o' clock , the hands of the clock will be in opposite side ?

A. **7:05**

B. 7:30

C. 7:45

D. None of the above

At what time(s) between 7 and 8 o' clock , the hands of the clock will be at right angles (approx.) ?

A. 7:11 and 7:31

B. 7:22 and 7:55

C. 7:35 only

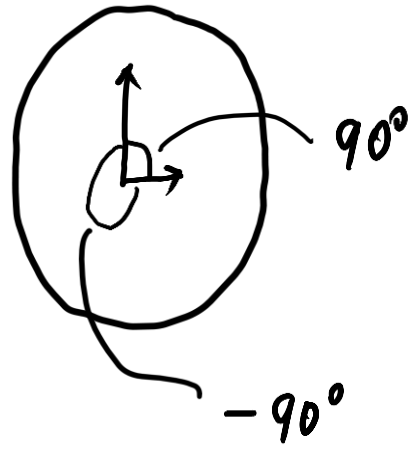
D. None of the above

$$\pm 90^\circ = \frac{11m - 60h}{2}$$

$$\pm 180^\circ = 11m - 60 \times 7$$

$$11m = 60(7 \pm 3)$$

$$m = \frac{60}{11}(7 \pm 3)$$



$$m = \frac{60}{11}(7 \pm 3)$$

$$m = \frac{60}{11}(7+3) \qquad m = \frac{60}{11}(7-3)$$

$$m = \frac{600}{11} = 54.5 \sim 55 \qquad m = \frac{240}{11} = 21.8 \sim 22$$

7:55

7:22

At what time(s) between 7 and 8 o’ clock , the hands of the clock will be at right angles (approx.) ?

A. 7:11 and 7:31

B. 7:22 and 7:55

C. 7:35 only

D. None of the above

At what time between 3 and 4 o' clock , the hands of the clock will be 4 mins apart ?

A. 3:12

B. 3:15

C. 3:14

D. 3:16

Angle in between = 4 mins = $4 \times 6^\circ = 24^\circ$

$$\pm 24^\circ = \frac{11m - 60h}{2}$$

$$48^\circ = 11 \times m - 60 \times 3$$

$$11m = 48^\circ + 180^\circ$$

$$m = \frac{228^\circ}{11} = 20.7 \sim 21 \text{ minutes}$$

(3:21)

$$-48^\circ = 11m - 180^\circ$$

$$11m = 180^\circ - 48^\circ = 132^\circ$$

$$m = \frac{132^\circ}{11} = 12$$

(3:12) (available in options)

At what time between 3 and 4 o’ clock , the hands of the clock will be 4 mins apart ?

A. **3:12**

B. 3:15

C. 3:14

D. 3:16

What is the angle between the hour hand and the minute hand of the clock when the clock shows 4 hours and 40 minutes ?

A. 80°

B. 100°

C. 120°

D. 220°

$$\theta = \frac{11m - 60h}{2}$$

$$\theta = \frac{11 \times 40 - 60 \times 4}{2}$$

$$\theta = \frac{440 - 240}{2} = 100^\circ$$

What is the angle between the hour hand and the minute hand of the clock when the clock shows 4 hours and 40 minutes ?

A. 80°

B. 100°

C. 120°

D. 220°

11:20 ‘o clock makes an angle between hour and minute hand

A. 130°

B. 150°

C. 120°

D. 140°

$$\theta = \frac{11 \times 20 - 60 \times 11}{2}$$

$$\theta = \frac{-440}{2} = -220°$$

$$360° - 220° = 140°$$

11:20 ‘o clock makes an angle between hour and minute hand

A. 130°

B. 150°

C. 120°

D. 140°

A clock started at noon. By 10 minutes past 5, the hour hand has turned through

A. 140°

B. 145°

C. 155°

D. 175°

Hour hand in 1 hour $= \frac{360^\circ}{12} = 30^\circ$

Minute hand in 1 minute $= \frac{360^\circ}{60} = 6^\circ$

10 minutes past 5 $= 5 \times 60 + 10$

$= 310$ minute

Hour hand in 1 minute $= \frac{30^\circ}{60} = \frac{1^\circ}{2}$

In 310 mins, hour hand will move through $= \frac{1^\circ}{2} \times 310^\circ = 155^\circ$

A clock started at noon. By 10 minutes past 5, the hour hand has turned through

A. 140°

B. 145°

C. 155°

D. 175°

AFCAT 1 2025

MATHS

PROGRESSIONS

MCQS