



Mahendra's



SSC CGL/CPO/CHSL

REASONING

CLOCK

PART-3



LIVE

07:30 PM

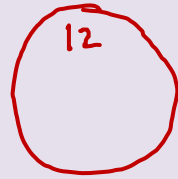


Q.17: A clock is started at noon. By 10 minutes past 5, the hour hand has turned through by what angle?

प दोपहर में एक घड़ी शुरू हो गई है घड़ी में 5:10 पर घंटे की सुई ने कितना डिग्री का कोण बनाया है?

(A) 155°

(C) 130°



(B) 67°

(D) 230°

$$12 \text{ hrs} = 360^\circ$$

$$\frac{1 \text{ hrs}}{12} = \frac{360^\circ}{12} = \underline{30^\circ}$$

95°

5:10

5:00 5:10

$5 \times 30^\circ$ $5 \times 10 \times \left(\frac{11}{12}\right)^\circ$

$\underline{150^\circ}$ $\underline{55^\circ}$

$150^\circ - 55^\circ = \underline{95^\circ}$

$$\boxed{2 : 48} \rightarrow$$

reflex angle

24

$$\frac{48 \times 11}{2}$$

$$\frac{2}{\times 30^\circ}$$

60°

264

204° → reflex

(cycle)

$$\frac{360^\circ}{=}$$

$$60^\circ$$

$$300^\circ$$

$$75^\circ$$

$$285^\circ$$

$$\frac{24 \times 11}{=}$$

264

180 > Normal angle

180 < Reflex angle

FIND ANGLE OF ANY TIME

$$\text{Time} = \left[\underline{30} * H - \underline{11/2} * \underline{\text{MIN}} \right]$$

Q.18: At what angle the hands of a clock are inclined at 15 minutes past 5?

घड़ी में 5:15 बजे पर घंटे की सुई का झुकाव ज्ञात कीजिए?

(A) 157.5°

(B) 164.5°

(C) 67.5° ✓

(D) 52.5°

$$= 150 - 82.5^\circ$$
$$= \textcircled{67.5^\circ} \quad \checkmark$$

5:15

$05 \times 30^\circ$ $15 \times \left(\frac{11}{2}\right)^\circ$

$$\frac{150^\circ}{.2} = \frac{165^\circ}{.2} = 82.5^\circ$$

Q.19: At what angle the hands of a clock are inclined at 30 minutes past 6?

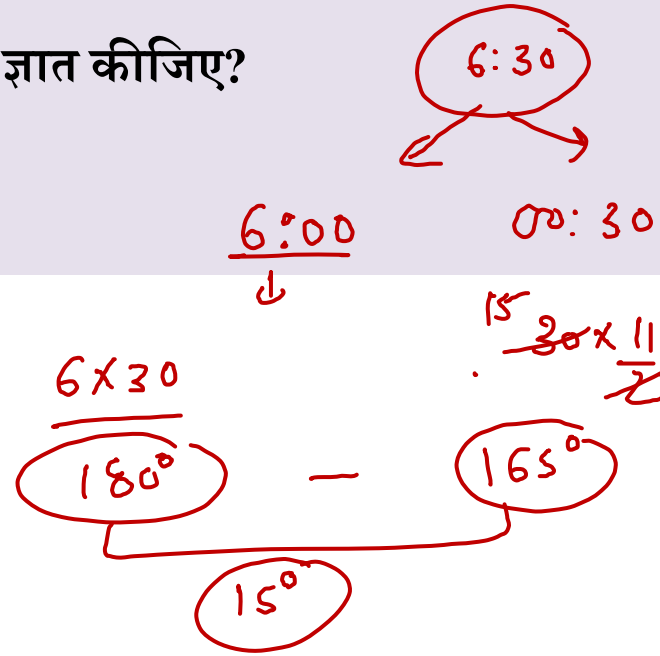
घड़ी में 6:30 बजे पर घंटे की सुई का झुकाव ज्ञात कीजिए?

(A) 0°

(B) 15°

(C) 12.5°

(D) 10°



Q.20: At what angle the hands of a clock are inclined at 30 minutes past 3?

reflex angle

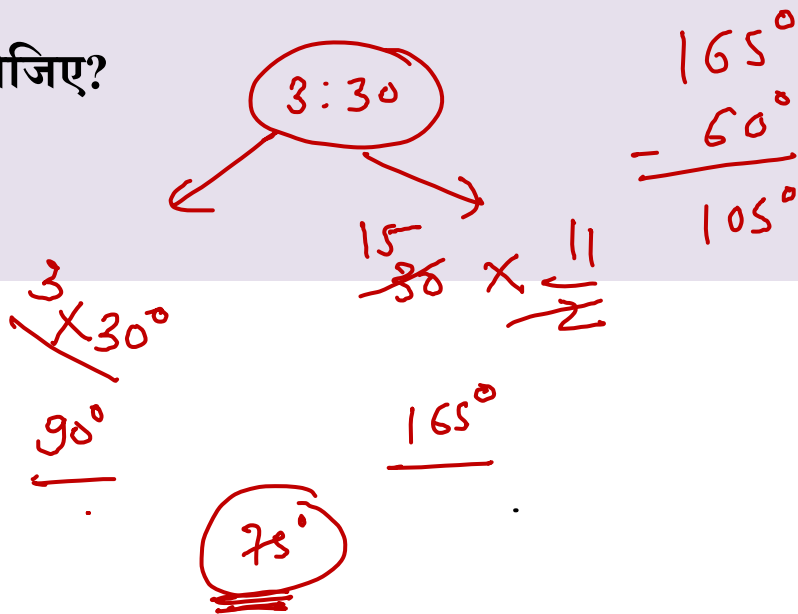
घड़ी में 3:30 बजे पर घंटे की सुई का झुकाव ज्ञात कीजिए?

~~(A)~~ 105°

(B) 90°

~~(C)~~ 75°

(D) 102.5°



CONCEPT OF SLOW AND FAST

Slow
fast
=

A hand-drawn diagram in red ink. It features two circles stacked vertically. The top circle contains the word "Slow" and the bottom circle contains the word "fast". To the right of these circles is a large right-facing curly bracket. Below the circles are two horizontal parallel lines, resembling an equals sign.

Q.21: A clock loses 20 minutes every hour. The clock is set correctly at 7:00 am on Thursday. When will it again show the correct time?

एक घड़ी हर घंटे 20 मिनट खो देती है। गुरुवार को सुबह 7:00 बजे घड़ी सही ढंग से सेट की गई है। यह फिर सही समय कब दिखाएगा? ✓

$$\frac{720}{20}$$

1 hrs = 20 min loss

20 min loss = 1 hrs.

1 min loss = $\frac{1}{20}$ hrs.

720 min = $\frac{720}{20}$ hrs = 36 hrs

720 min loss =

36 hrs

7:00 Am Thurs

7:00 Am Fri

7:00 PM Fri

7:00 Am Thurs.

12 hrs loss

1 hrs = 60 min

12 hrs = 12 x 60 = 720 min.

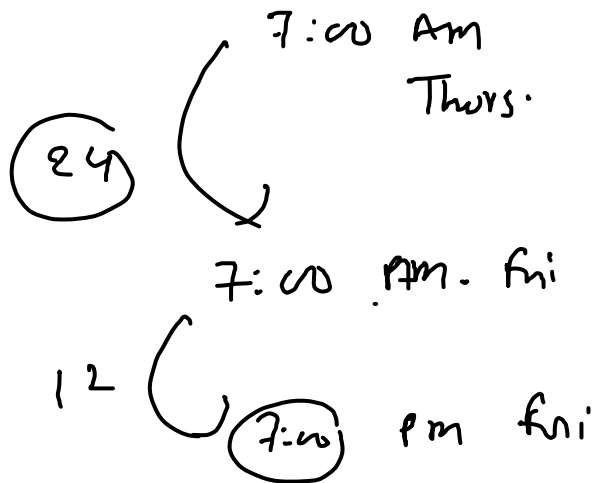
$$\underline{1 \text{ hrs}} = \underline{20 \text{ mi/h.}}$$

$$\underline{\underline{20 \text{ mi/h}}} = \underline{1 \text{ hrs}}$$

$$720 \text{ mi/h} = \text{L.}$$

$$\frac{1}{20} \times \cancel{720} \text{ hrs.}$$

$$\textcircled{12} \text{ hrs.} = \textcircled{\frac{720 \text{ mi/h}}{\text{Loss.}}}$$



Q.22: A clock gains 10 minutes every 1 hour, if it is found at the right time at 10am on Wednesday, then when will it show the correct time?

एक घड़ी हर 1 घंटे में 10 मिनट आगे बढ़ती है, अगर बुधवार को सुबह 10 बजे सही समय पर मिल जाए तो सही समय कब दिखाएगा?

- a) Thursday night at 10 pm (b) Friday morning at 10 am
(c) Saturday night at 10 pm (d) Saturday morning at 10 am

120 Loss

Q.22: A clock gains 10 minutes every 1 hour, if it is found at the right time at 10am on Wednesday, then when will it show the correct time?

(NC) ⇒

(12) hrs.

↓

(72) min

- (a) Thursday night at 10 pm
 (b) Friday morning at 10 am
 (c) Saturday night at 10 pm
 (d) Saturday ~~morning~~ at 10 am

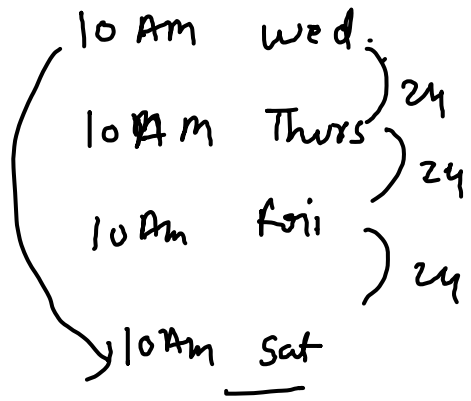
$$1 \text{ hrs} = 10 \text{ min gain}$$

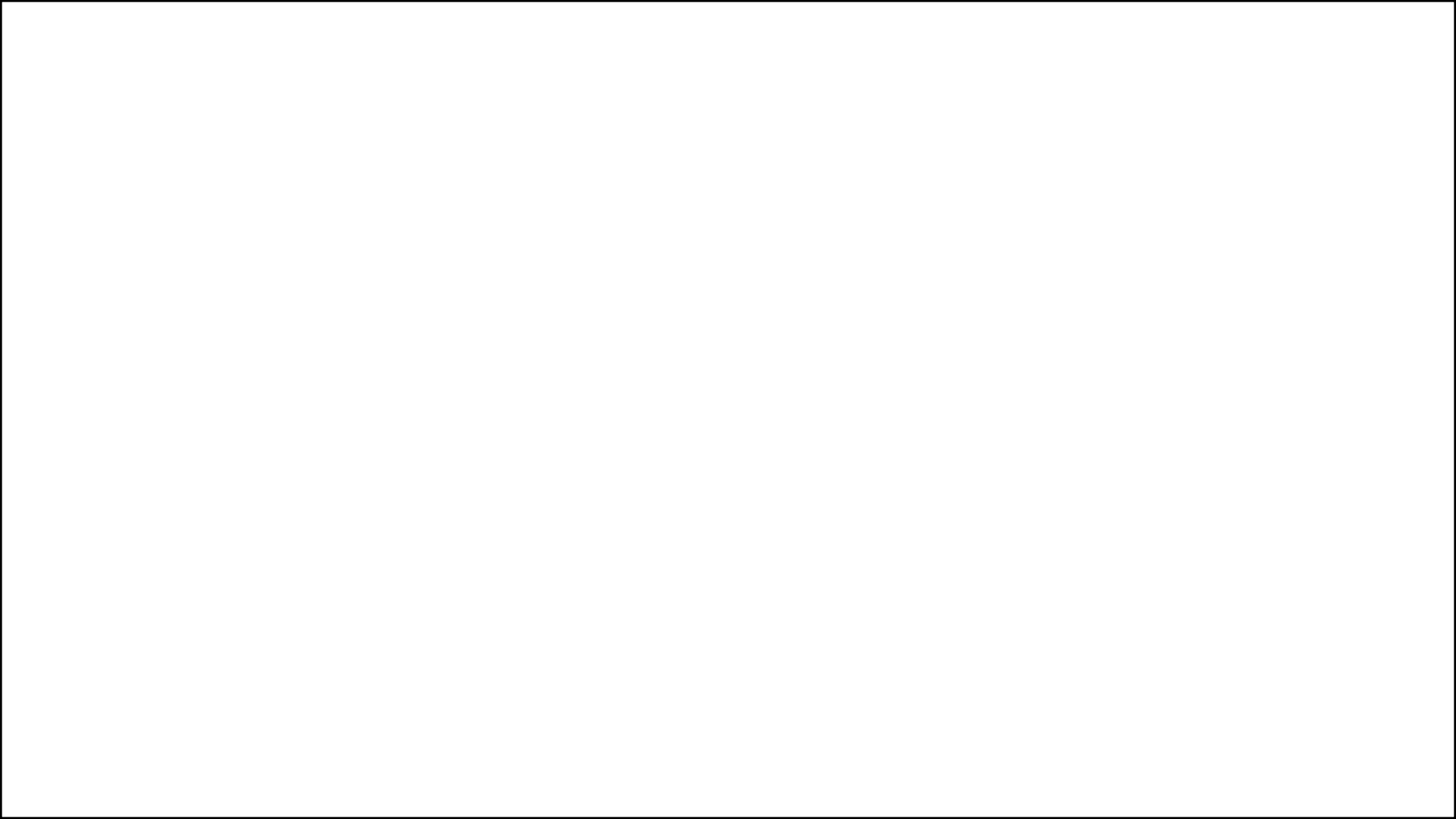
$$10 \text{ min} = 1 \text{ hrs.}$$

$$1 \text{ min} = \frac{1}{10}$$

$$720 \text{ min} = 720 \times \frac{1}{10}$$

$$= (72 \text{ hrs})$$





Q.23: One clock gains 10 minutes every 1 hour and the second clock slows down 10 minutes every 1 hour. If they are properly timed at 6:00pm on Wednesday, when will the correct time show again?

एक घड़ी हर 1 घंटे में 10 मिनट आगे बढ़ती है और दूसरी घड़ी हर 1 घंटे में 10 मिनट धीमी हो जाती है। यदि वे बुधवार को सायं 6:00 बजे ठीक से समय पर हों, तो फिर सही समय कब दिखाई देगा?

(a) Saturday at 9 pm

b) Monday at 6 am

c) Wednesday at 9 pm

d) Friday at 6 am

Q.23: One clock gains 10 minutes every 1 hour and the second clock slows down 10 minutes every 1 hour. If they are properly timed at 6:00pm on Wednesday, when will the correct time show again?

- (a) Saturday at 9 pm b) Monday at 6 am
c) Wednesday at 9 pm ✓ ~~d) Friday at 6 am~~



- ①.
- ② clock
- ① clock

1st clock

→ 10mih gain.

2nd clock →

10mih loss.

6:00 PM wed

Slow Slow
 gain gain
 ⊖ ⊖

↓ f36

20mih → hrs.

6:00 PM Thursday

Slow + gain
 ⊕

1mih → 1hr.
 20.

(+12
 6:00 AM fri)

720mih → $\frac{1}{20} \times \frac{36}{20}$

gain + Slow.
 ⊕

720mih = 36hr

Q.24: One clock gains 16 minutes every 3 hours and the second clock slows down 14 minutes every 3 hours. If they are mixed with the correct time at 7 pm on Thursday, then when will the correct time show?

एक घड़ी हर 3 घंटे में 16 मिनट आगे बढ़ती है और दूसरी घड़ी हर 3 घंटे में 14 मिनट धीमी हो जाती है। यदि गुरुवार को शाम 7 बजे इन्हें सही समय के साथ मिला दिया जाए तो सही समय कब दिखाई देगा?

(a) Sunday at 7 pm

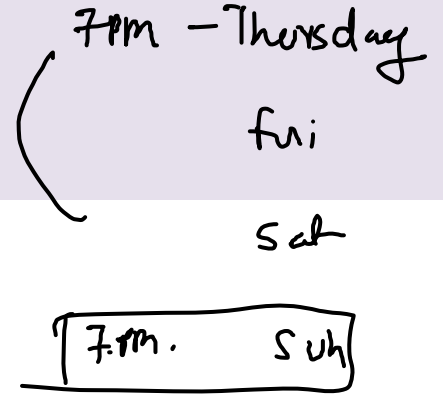
b) Monday at 7 pm

(c) Saturday at 7 pm

d) Tuesday at 7 pm

Q.24: One clock gains 16 minutes every 3 hours and the second clock slows down 14 minutes every 3 hours. If they are mixed with the correct time at 7 pm on Thursday, then when will the correct time show?

- (a) Sunday at 7 pm ✓ b) Monday at 7 pm
 (c) Saturday at 7 pm d) Tuesday at 7 pm

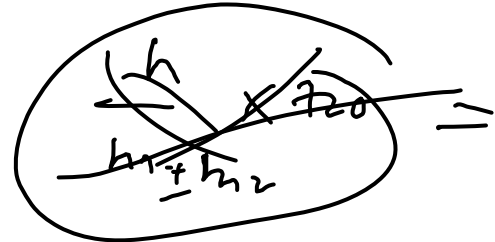


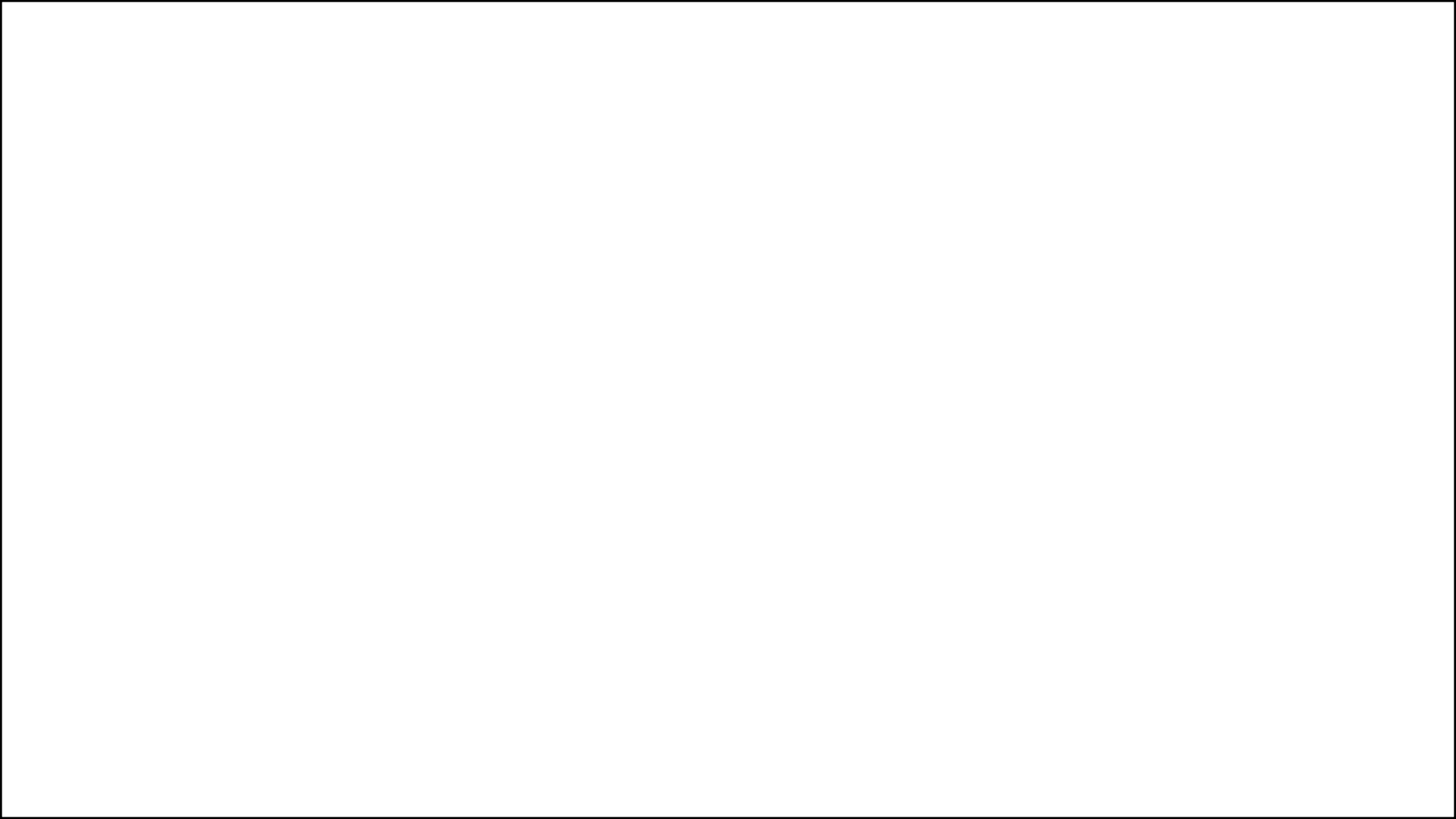
$$30 \text{ min} = 3 \text{ hrs.}$$

$$1 \text{ min} = \frac{3}{30} \text{ hrs.}$$

$$720 \text{ min} = \frac{3}{30} \times 720$$

$$= \underline{72} \text{ hrs.}$$



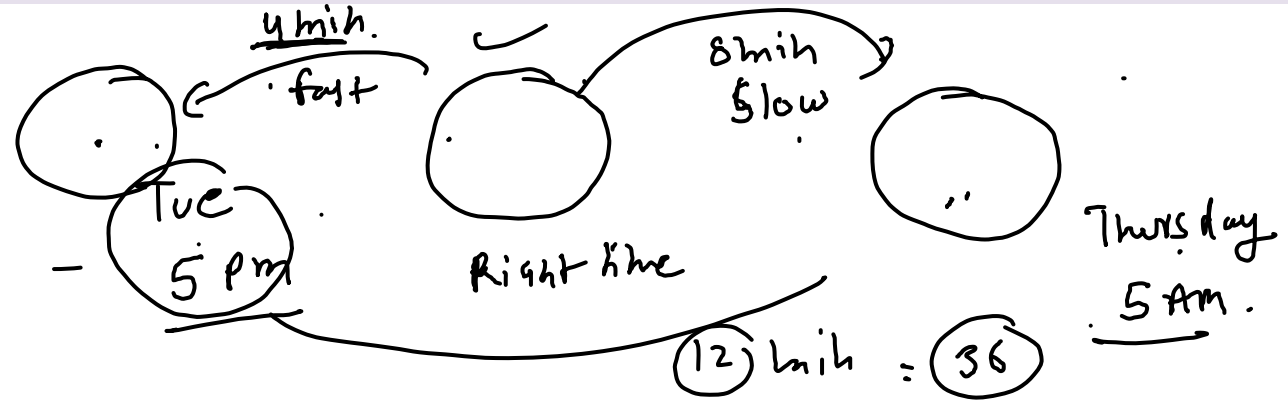


Q.25: When a clock was seen at 5 o'clock on Tuesday evening, it was moving 4 minutes fast, It was 8 minutes slow when it was seen at 5 in the morning on Thursday. When was the clock showing the correct time? मंगलवार की शाम 5 बजे जब एक घड़ी देखी गई तो वह 4 मिनट तेज चल रही थी, गुरुवार की सुबह 5 बजे देखी गई तो 8 मिनट धीमी थी। घड़ी कब सही समय दिखा रही थी?

- a) Saturday at 5 pm b) Thursday at 5 am
 c) Wednesday at 5 pm d) Wednesday at 5 am

$$\boxed{S + f = \textcircled{+}}$$

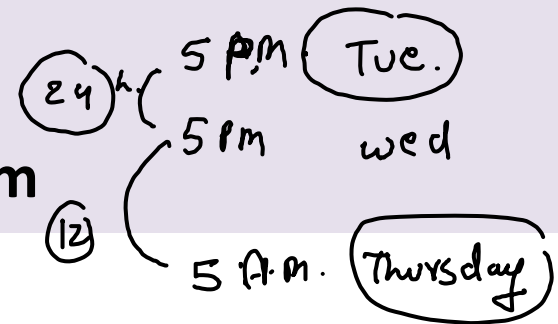
$$\textcircled{-}$$



Q.25: When a clock was seen at 5 o'clock on Tuesday evening, it was moving 4 minutes fast, It was 8 minutes slow when it was seen at 5 in the morning on Thursday. When was the clock showing the correct time?

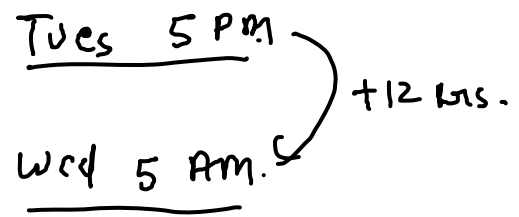
- a) Saturday at 5 pm
- c) Wednesday at 5 pm

- b) Thursday at 5 am
- d) Wednesday at 5 am



4 fast + 8 min = 12 min \Rightarrow

$12 \text{ min} = 36 \text{ hrs.}$
 $1 \text{ min} = 3 \text{ hrs.}$
 $4 \text{ min} = 12 \text{ hrs.}$



$$\textcircled{f} - \textcircled{f} = \textcircled{-}$$

$$\textcircled{s} - \textcircled{s} = \textcircled{-}$$

$$f \& s \rightarrow \textcircled{+}$$

$$s \& f \rightarrow \textcircled{+}$$

Q.26: When a watch was seen at 8 o'clock on Thursday night, it moving 20 minutes fast, When it was seen at 10pm on Saturday, it was 10 minutes fast, When was the clock showing the correct time? गुरुवार की

रात 8 बजे जब एक घड़ी देखी गई तो वह 20 मिनट तेज चल रही थी, शनिवार को रात 10 बजे देखी गई तो वह 10 मिनट तेज थी, घड़ी सही समय कब दिखा रही थी?

Thursday → 8 o'clock

✓

✗ ✗

a) Saturday at 7 pm

b) Thursday at 8 am

c) Monday at 11 pm

d) Wednesday at 6 am

Q.26: When a watch was seen at 8 o'clock on Thursday night, it moving 20 minutes fast, When it was seen at 10pm on Saturday, it was 10 minutes fast, When was the clock showing the correct time?

- a) Saturday at 7 pm b) Thursday at 8 am
 c) ~~Monday at 12 pm~~ d) Wednesday at 6 am

(Tuesday)

$$\boxed{20 - 10} = \textcircled{10} \text{ min.}$$

10 min = 5 hrs
 1 min = 5 hrs.
 20 min = 20 x 5 = 100 hrs

8 pm Thurs } 24
~~20~~ Fri } 24
 10 pm Sat } +2

24 x 4 = 96
 + 4

8 pm + 4
12 AM (Monday)

Thurs }
 Fri }
 Sat }
 Sun }
 Mon }