

✓ Analytical Aptitude

Part-1

Venn Diagrams
Syllogism
Direction
Blood Relation
Coding Decoding
Comparison
Series

Part-2

Seating Arrangement
Data Interpretation
Clock

Seating Arrangement

Linear
Circular

69. A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A.
Who is to the right of P?

A

X

S

Z

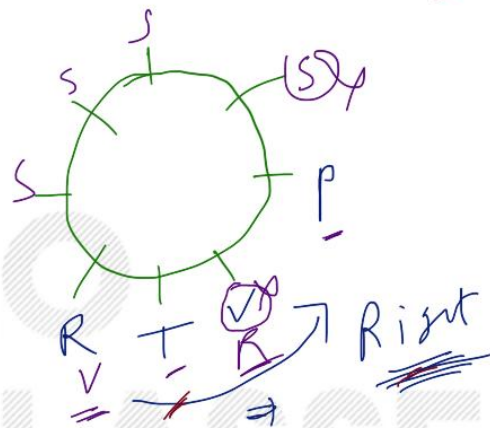
P

SZ

R A P

P, Q, R, S, T, U, V and W are sitting round the circle and are facing the centre:

1. P is second to the right of T who is the neighbour of R and V.
2. S is not the neighbour of P.
3. V is the neighbour of U.
4. Q is not between S and W. W is not between U and S.



73. What is the position of S ?

- A. Between U and V
- B. Second to the right of P
- C. To the immediate right of W
- D. Data inadequate.

70. Which two of the following are not neighbours ? 71. Which one is immediate right to the V ?

- A. RV
- B. UV
- C. RP
- D. QW

- A. P
- B. U
- C. R
- D. T

72. Which of the following is correct ?

- A. P is to the immediate right of Q
- B. R is between U and V
- C. Q is to the immediate left of W
- D. U is between W and S

74-77. Five girls are sitting on a bench to be photographed. Seema is to the left of Rani and to the right of Bindu. Mary is to the right of Rani. Reeta is between Rani and Mary.

74. Who is sitting immediate right to Reeta ?

- A. Bindu
- B. Rani
- ☒ C. Mary
- D. Seema

Handwritten diagram showing the seating arrangement from left to right: Bindu (B), Seema (S), Reeta (R), Mary (M), and an empty space (indicated by an equals sign). Reeta is circled, and an arrow points from the question to her.

76. Who is in the middle of the photograph ?

- A. Bindu
- ☒ B. Rani
- C. Reeta
- D. Seema

75. Who is second from the right ?

- A. Mary
- B. Rani
- ☒ C. Reeta
- D. Bindu

77. Who is second from the left in photograph ?

- A. Reeta
- B. Mary
- C. Bindu
- ☒ D. Seema

78. Five friends P, Q, R, S and T went camping. At night, they had to sleep in a row inside the tent. P, Q and T refused to sleep next to R since he snored loudly. P and S wanted to avoid Q as he usually hugged people in sleep.

Assuming everyone was satisfied with the sleeping arrangements, what is the order in which they slept?

A. RSPTQ ✓

B. SPRTQ

C. QRSPT

D. QTSPR

Handwritten diagram showing a row of five positions. Above the first position is 'R', above the second is 'S', above the third is 'P' and 'T', above the fourth is 'Q', and above the fifth is 'Q'. A red arrow points from the first position to the second, and another red arrow points from the fourth position to the fifth.

GATE CE 2020

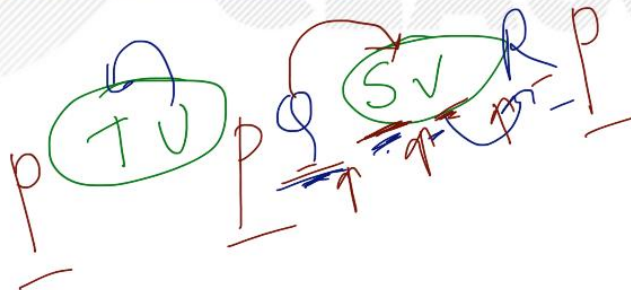
Handwritten diagram showing a row of five positions. Above the first position is 'Q', above the second is 'P' and 'T', above the third is 'S', and above the fourth is 'R'. A red arrow points from the first position to the second, and another red arrow points from the third position to the fourth.

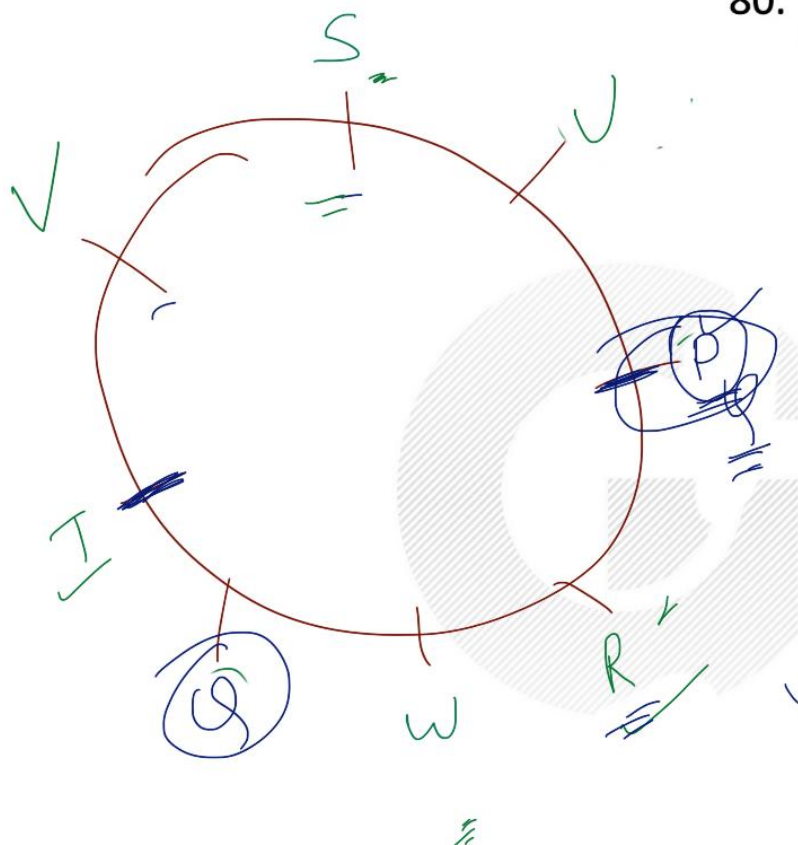
79. Seven cars P, Q, R, S, T, U and V are parked in a row not necessarily in that order. The cars T and U should be parked next to each other. The cars S and V also should be parked next to each other, whereas P and Q cannot be parked next to each other. Q and S must be parked next to each other. R is parked to the immediate right of V. T is parked to the left of U.

Based on the above statements, the only INCORRECT option given below is:

- ~~A.~~ There are two cars parked in between Q and V. ~~✗~~ \approx
B. Q and R are not parked together. ✓
C. V is the only car parked in between S and R. ✓
D. Car P is parked at the extreme end. ✓

GATE EE 2021





80. P, Q, R, S, T, U, V, and W are seated around a circular table.

- I. S is seated opposite to W
- II. U is seated at the second place to the right of R
- III. T is seated at the third place to the left of R
- IV. V is a neighbour of S

Which of the following must be true?

- A. P is a neighbour of R
- B. Q is a neighbour of R
- C. P is not seated opposite to Q
- D. R is the left neighbour of S

GATE ChE 2020

- ✓ 81. ✓ P, Q, R, S, T , and U are seated around a circular table R is seated two places to the right of Q . P is seated three places to the left of R . S is seated opposite U . If P and U now switch seats, which of the following must necessarily be true?

- A. P is immediately to the right of R
- B. T is immediately to the left of P
- C. T is immediately to the left of P or P is immediately to the right of Q
- D. U is immediately to the right of R or P is immediately to the left of T

GATE CE 2017



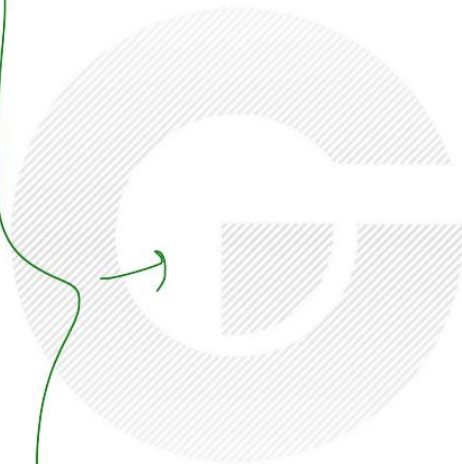
Data Interpretation

Table Chart

Bar Chart

Pie Chart

Line Chart



GO
CLASSES

Study the following table and answer the questions based on it.

Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

Year	Item of Expenditure				
	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

82. What is the average amount of interest per year which the company had to pay during this period?

- A. Rs. 32.43 lakhs
- B. Rs. 33.72 lakhs
- C. Rs. 34.18 lakhs
- ☒ D. Rs. 36.66 lakhs

$$\frac{183.3}{5} = \text{Ans.} = 36.66$$

Study the following table and answer the questions based on it.

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1710

17

$$\frac{17}{1710} \times 100 \Rightarrow \frac{170}{171}$$

83. The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?

A. 0.1%

B. 0.5%

☒ C. 1%

D. 1.25%

Study the following table and answer the questions based on it.

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84. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately?

A. 4:7

B. 10:13

C. 15:18

D. 5:8

A shaving set company sells 4 different types of razors- Elegance, Smooth, Soft and Executive.

Elegance sells at Rs. 48, Smooth at Rs. 63, Soft at Rs. 78 and Executive at Rs. 173 per piece. The table below shows the numbers of each razor sold in each quarter of a year.

Quarter/Product	Elegance	Smooth	Soft	Executive
Q1	27300	20009	17602	9999
Q2	25222	19392	18445	8942
Q3	28976	22429	19544	10234
Q4	21012	18229	16595	10109

85. Which product contributes the greatest fraction to the revenue of the company in that year?

- A. Elegance
- B. Executive
- C. Smooth
- D. Soft

Year → 102510 80059 72186 39204 ✓
 49,20,480 50,43,717 56,30,150 67,96,132
 GATE CSE 2016

86. The temperature T in a room varies as a function of the outside temperature T_0 and the number of persons in the room p , according to the relation $T = K(\theta p + T_0)$, where θ and K are constants. What would be the value of θ given the following data?

T_0	p	T
25	2	32.4
30	5	42.0

A. 0.8

B. 1.0

C. 2.0

D. 10.0

GATE CE 2018

$$32.4 = K(2\theta + 25) \quad \text{--- (1)}$$

$$42 = K(\underline{5\theta} + 30) \quad \text{--- (2)}$$

$$162\theta + 972 = 84\theta + 1050$$

$$78\theta = 78$$

$$\theta = 1$$

87. Mola is a digital platform for taxis in a city. It offers three types of rides – Pool, Mini and Prime. The table below presents the number of rides for the past four months. The platform earns one US dollar per ride. What is the percentage share of the revenue contributed by Prime to the total revenues of Mola, for the entire duration?

Type	Month			
	January	February	March	April
Pool	170	320	215	190
Mini	110	220	180	70
Prime	75	180	120	90

- A. 16.24
B. 23.97
C. 25.86
D. 38.74

Ans

$$\frac{465}{1940} \times 100$$

GATE ME 2019

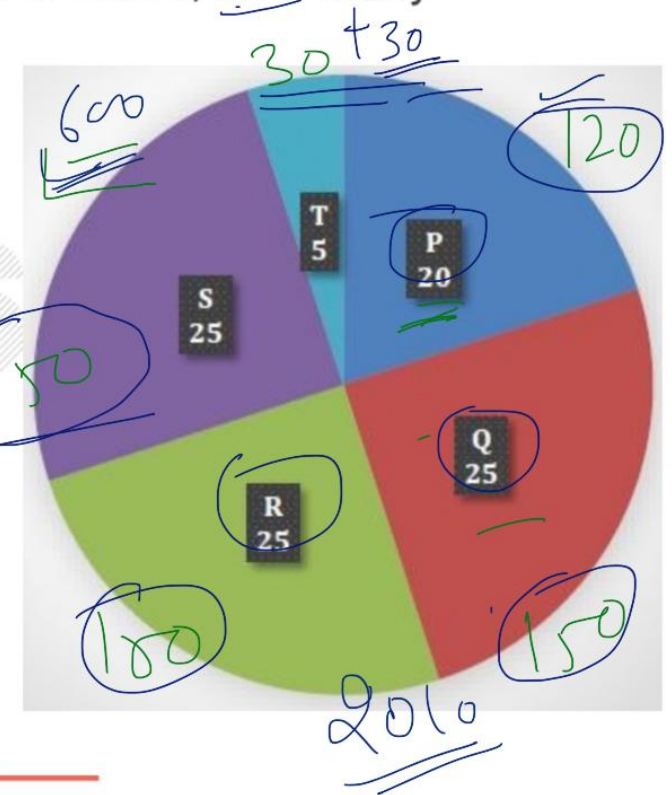
88. A firm hires employees at five different skill levels P, Q, R, S, T. The shares of employment at these skills levels of total employment in 2010 is given in the pie chart as shown. There were a total of 600 employees in 2010 and the total employment increased by 15% from 2010 to 2016. The total employment at skill levels P, Q and R remained unchanged during this period. If the employment at skill level S increased by 40% from 2010 to 2016, how many employees were there at skill level T in 2016? **GATE ME 2019**

A. 30

B. 35

C. 60

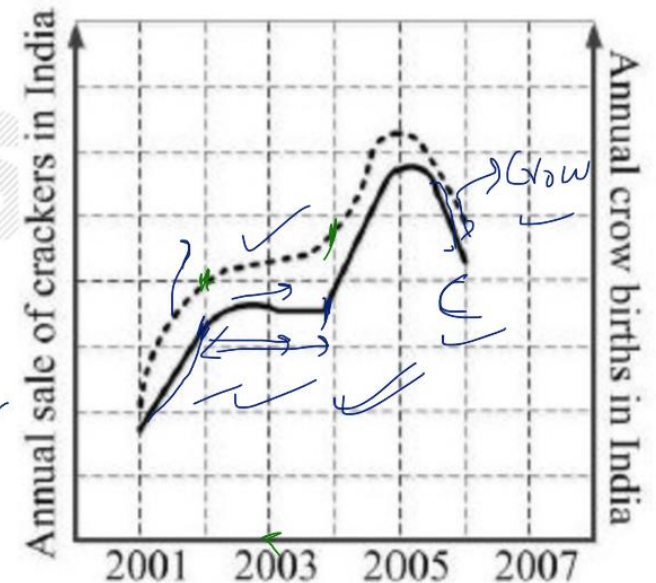
D. 72



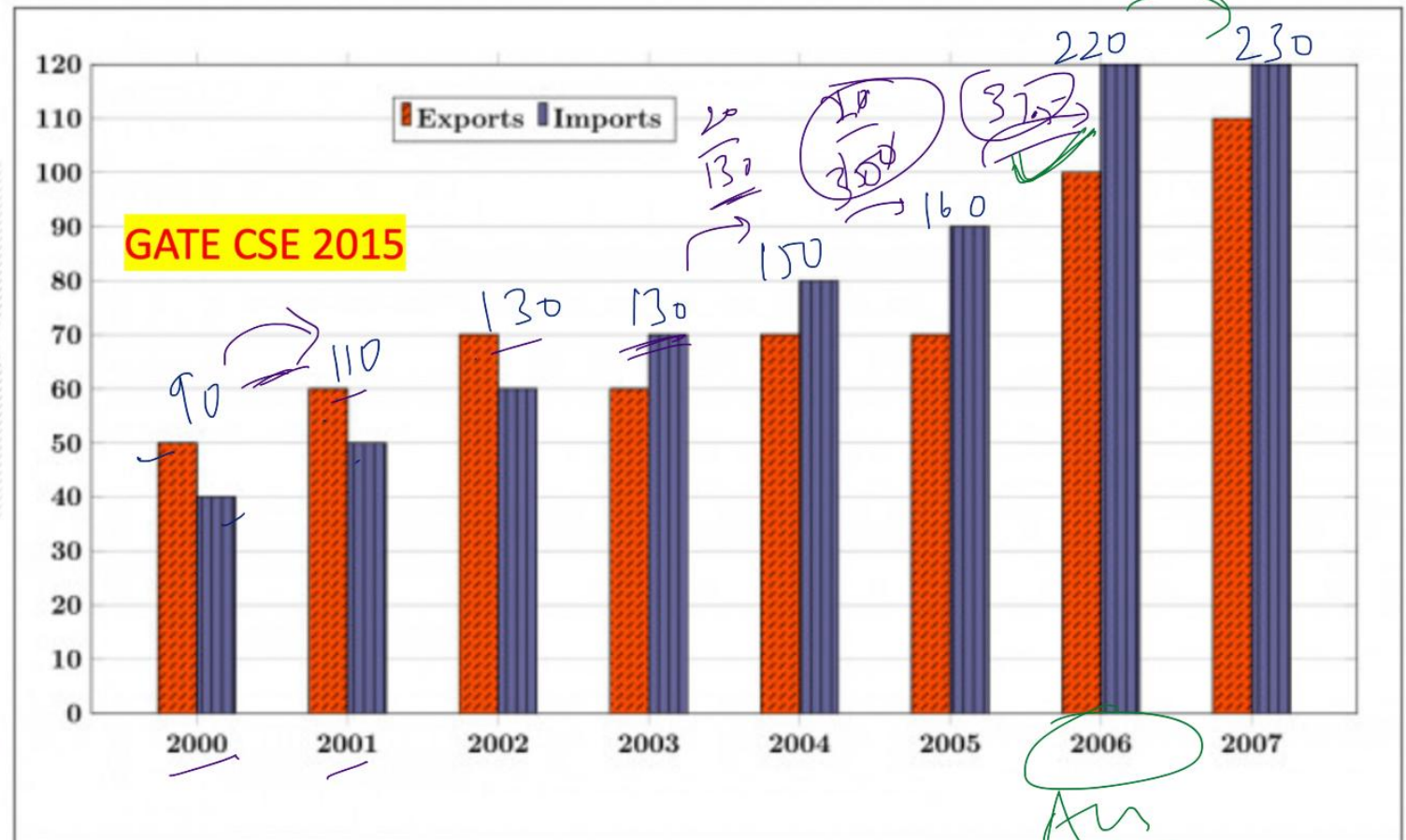
91. In a detailed study of annual crow births in India, it was found that there was relatively no growth during the period 2002 to 2004 and a sudden spike from 2004 to 2005. In another unrelated study, it was found that the revenue from cracker sales in India which remained fairly flat from 2002 to 2004, saw a sudden spike in 2005 before declining again in 2006. The solid line in the graph below refers to annual sale of crackers and the dashed line refers to the annual crow births in India. Choose the most appropriate inference from the above data.

- ☒ A. There is a strong correlation between crow birth and cracker sales.
- B. Cracker usage increases crow birth rate.
- C. If cracker sale declines, crow birth will decline.
- D. Increased birth rate of crows will cause an increase in the sale of crackers.

GATE ChE 2018

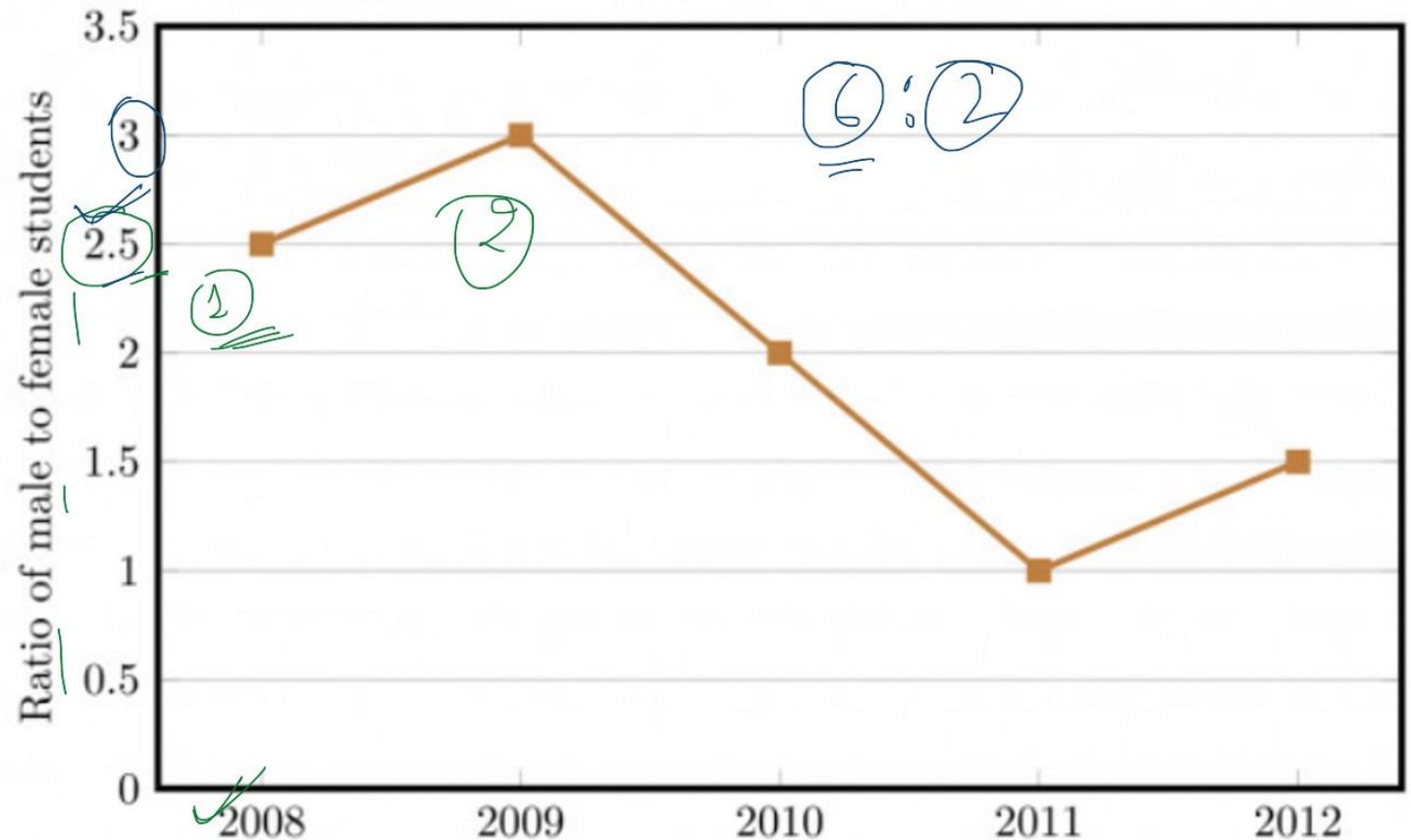


94. The exports and imports (in crores of Rs.) of a country from the year 2000 to 2007 are given in the following bar chart. In which year is the combined percentage increase in imports and exports the highest?



95. The ratio of male to female students in a college for five years is plotted in the following line graph. If the number of female students doubled in 2009, by what percent did the number of male students increase in 2009?

GATE CSE 2014

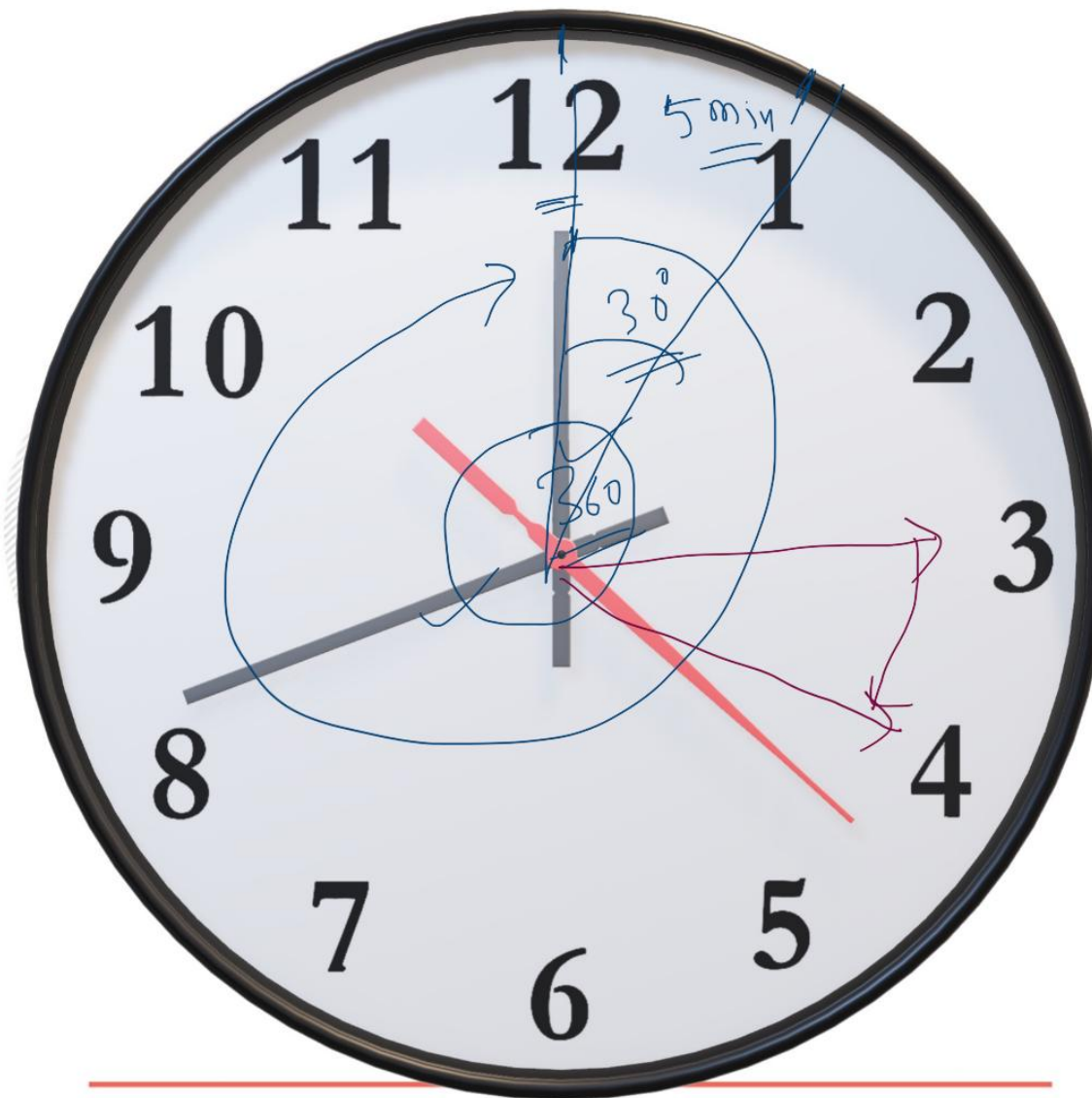


$$\frac{3.5}{2.5} \times 100$$

$$\Rightarrow 140\%$$

Clock

min
hour
60 min
5 min

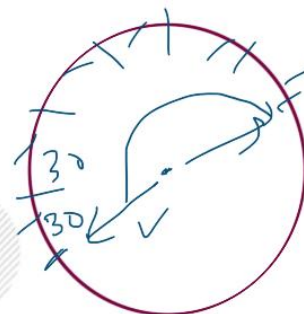


$$\frac{360^\circ}{12} \Rightarrow \underline{\underline{30'}}$$

$$\underline{\underline{60}} \rightarrow \underline{\underline{1 \text{ min}}}$$

97. An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

- A. 144°
- B. 150°
- C. 168°
- ☒ D. 180°



$$6 \times 30 =$$

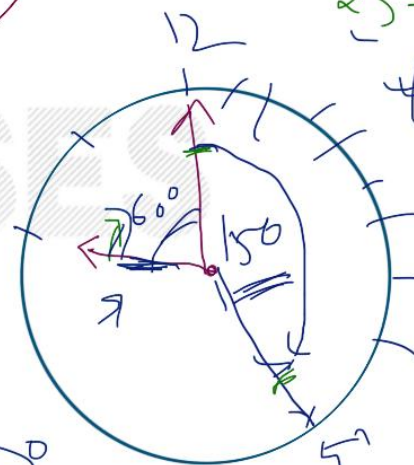
98. The reflex angle between the hands of a clock at 10.25 is:

- A. 180°
- B. $192 \frac{1}{2}^\circ$
- C. 195°
- ☒ D. $197 \frac{1}{2}^\circ$

$$210$$

$$10.25$$

$$\frac{5 \times 25}{60} \times 6 \rightarrow 12.5$$



$$60 \rightarrow 5$$

$$25 \rightarrow 5$$

$$60 \times 25$$

99. How many times in a day, the hands of a clock are straight?

☒ A. 22

☐ B. 24

☐ C. 44

☐ D. 48

24 times



GO CLASSES

100. How many times do the hands of a clock coincide in a day?

☐ A. 20

☐ B. 21

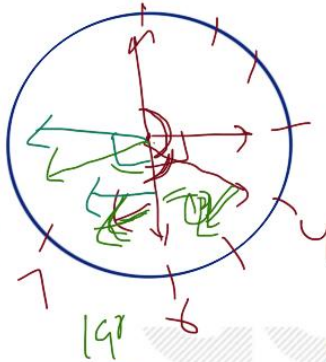
☒ C. 22

☐ D. 24



101. At what time between 6 a.m. and 7 a.m. will the minute hand and hour hand of a clock make an angle closest to 60° ?

- ✓ A. 6 : 22 a.m. ✓ 61° ✓
 B. 6 : 27 a.m. $\rightarrow 31.5^\circ$
 C. 6 : 38 a.m. $\rightarrow 17.5^\circ$
 D. 6 : 45 a.m. $\rightarrow 15^\circ$



$6:22$

GATE CSE 2014

$$\frac{27}{2} = 13.5$$

$$\frac{5}{60} \times 22 \times 6$$

$$22 \times \frac{1}{2} \Rightarrow 11$$

102. It is quarter past three in your watch. The angle between the hour hand and the minute hand is _____.

- A. 0°
 B. 7.5°
 C. 15°
 D. 22.5°

GATE EC 2020

103. A digital watch X beeps every 30 seconds while watch Y beeps every 32 seconds. They beeped together at 10 AM.

The immediate next time that they will beep together is ____

- A. 10.08 AM
- B. 10.42 AM
- C. 11.00 AM
- D. 10.00 PM

$$\begin{array}{r} 30 \\ \times 96 \\ \hline 64 \end{array}$$

$$\begin{array}{r} 30 \\ \times 32 \\ \hline 420 \end{array}$$

GATE ME 2021

104. Two and quarter hours back, when seen in a mirror, the reflection of a wall clock without number markings seemed to show 1 : 30. What is the actual current time shown by the clock?

- A. 8 : 15
- B. 11 : 15
- C. 12 : 15
- D. 12 : 45

GATE EC 2016

105. A faulty wall clock is known to gain 15 minutes every 24 hours. It is synchronized to the correct time at 9 AM on 11th July. What will be the correct time to the nearest minute when the clock shows 2 PM on 15th July of the same year?

A. 12 : 45 PM

~~B.~~ 12 : 58 PM

C. 1 : 00 PM

D. 2 : 00 PM

GATE CE 2018

106. A worker noticed that the hour hand on the factory clock had moved by 225 degrees during her stay at the factory. For how long did she stay in the factory?

A. 3.75 hours

B. 4 hours and 15 mins

C. 8.5 hours

D. 7.5 hours

GATE ME 2019

107. Two design consultants, P and Q , started working from 8 AM for a client. The client budgeted a total of USD 3000 for the consultants. P stopped working when the hour hand moved by 210 degrees on the clock. Q stopped working when the hour hand moved by 240 degrees. P took two tea breaks of 15 minutes each during her shift, but took no lunch break. Q took only one lunch break for 20 minutes, but no tea breaks. The market rate for consultants is USD 200 per hour and breaks are not paid. After paying the consultants, the client shall have USD _____ remaining in the budget.

A. 000.00

☒ B. 166.67

C. 300.00

D. 433.33

$$13 \frac{100}{2} \times 2 = 1300$$

$$1300 \text{ USD}$$

$$15 \times 2(30)$$

$$7 - 30 \text{ min.}$$

$$6.5 \text{ hr.}$$

$$Q \rightarrow 8 \text{ hr.} - 20 \text{ min.}$$

$$7 \text{ hr.} - 40 \text{ min.}$$

$$\frac{20}{60} \times 400 = 133.33$$

$$\text{USD } 2000$$

$$1400$$

GATE EC 2019

$$1533.33$$