Book For

State Bank Of India

भारतीय स्टेट बैंक
State Bank of India

SBI Clerk Aptitude Sample Paper

(1) An accurate clock shows 8 o'clock in the morning. Through how may degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon?

[A] 144?

[B] 150?

[C] 168?

[D] 180?

Answer : [D]

Explanation:

Angle traced by the hour hand in 6 hours = $\left(\frac{360}{12} \times 6\right)^{?}$ = 180?.

---

(2) A clock is started at noon. By 10 minutes past 5, the hour hand has turned through:

[A] 145?

[B] 150?

[C] 155?

[D] 160?

Answer : [C]

Explanation:

Angle traced by hour hand in 12 hrs = 360?.

Angle traced by hour hand in 5 hrs 10 min. *i.e.*, $\frac{31}{6}$ hrs = $\left(\frac{360}{12} \times \frac{31}{6}\right)^{?}$ = 155?.

---

(3) The angle between the minute hand and the hour hand of a clock when the time is 4.20, is:

[A] 0?

[B] 10?

[C] 5?

[D] 20?

Answer : [B]

Explanation:

Angle traced by hour hand in $\frac{13}{3}$ hrs = $\left(\frac{360}{12} \times \frac{13}{3}\right)^{?}$ = 130?.

Angle traced by min. hand in 20 min. = $\left(\frac{360}{60} \times 20\right)^{?}$ = 120?.

$\therefore$ Required angle = (130 - 120)? = 10?.

---

(4) How many times are the hands of a clock at right angle in a day?

[A] 22

[B] 24

[C] 44

[D] 48

Answer : [C]

Explanation:
In 12 hours, they are at right angles 22 times.
∴ In 24 hours, they are at right angles 44 times.

---

(5) At what time, in minutes, between 3 o'clock and 4 o'clock, both the needles will coincide each other?

[A]
$5\frac{1}{11}''$

[B]
$12\frac{4}{11}''$

[C]
$13\frac{4}{11}''$

[D]
$16\frac{4}{11}''$

Answer : [D]

Explanation:
At 3 o'clock, the minute hand is 15 min. spaces apart from the hour hand.
To be coincident, it must gain 15 min. spaces.
55 min. are gained in 60 min.
15 min. are gained in $\left(\frac{60}{55} \times 15\right)_{\text{min}} = 16\frac{4}{11}$ min.

∴ The hands are coincident at $16\frac{4}{11}$ min. past 3.

---

(6) The ratio between the perimeter and the breadth of a rectangle is 5 : 1. If the area of the rectangle is 216 sq. cm, what is the length of the rectangle?

[A] 16 cm

[B] 18 cm

[C] 24 cm

[D] Data inadequate

[E] None of these

Answer : [B]

Explanation:
$\frac{2(l + b)}{b} = \frac{5}{1}$

$\Rightarrow 2l + 2b = 5b$
$\Rightarrow 3b = 2l$
$b = \frac{2l}{}$

3

Then, Area = 216 cm^2
$\Rightarrow l \times b = 216$
$\Rightarrow l \times \frac{2}{3}l = 216$

$\Rightarrow l^2 = 324$
$\Rightarrow l = 18$ cm.

---

(7) A rectangular park 60 m long and 40 m wide has two concrete crossroads running in the middle of the park and rest of the park has been used as a lawn. If the area of the lawn is 2109 sq. m, then what is the width of the road?

[A] 2.91 m

[B] 3 m

[C] 5.82 m

[D] None of these

Answer : [B]

Explanation:
Area of the park = (60 x 40) m^2 = 2400 m^2.
Area of the lawn = 2109 m^2.
$\therefore$ Area of the crossroads = (2400 - 2109) m^2 = 291 m^2.
Let the width of the road be x metres. Then,
$60x + 40x - x^2 = 291$
$\Rightarrow x^2 - 100x + 291 = 0$
$\Rightarrow (x - 97)(x - 3) = 0$
$\Rightarrow x = 3$.

---

(8) A towel, when bleached, was found to have lost 20% of its length and 10% of its breadth. The percentage of decrease in area is:

[A] 10%

[B] 10.08%

[C] 20%

[D] 28%

Answer : [D]

Explanation:
Let original length = x and original breadth = y.

$$\text{Decrease in area} = xy - \left(\frac{80}{100}x \times \frac{90}{100}y\right)$$

$$= \left(xy - \frac{18}{25}xy\right)$$

$$= \frac{7}{25}xy.$$

$$\therefore \text{ Decrease \%} = \left(\frac{7}{25}xy \times \frac{1}{xy} \times 100\right)\% = 28\%.$$

---

(9) The length of a rectangular plot is 20 metres more than its breadth. If the cost of fencing the plot @ 26.50 per metre is Rs. 5300, what is the length of the plot in metres?

[A] 40

[B] 50

[C] 120

[D] Data inadequate

[E] None of these

Answer : [E]

Explanation:
Let breadth = x metres.
Then, length = $(x + 20)$ metres.
Perimeter = $\left(\frac{5300}{26.50}\right)$ m = 200 m.

$\therefore$ $2[(x + 20) + x] = 200$
$\Rightarrow 2x + 20 = 100$
$\Rightarrow 2x = 80$
$\Rightarrow x = 40.$
Hence, length = $x + 20$ = 60 m.

(10) A rectangular field is to be fenced on three sides leaving a side of 20 feet uncovered. If the area of the field is 680 sq. feet, how many feet of fencing will be required?

[A] 34

[B] 40

[C] 68

[D] 88

Answer : [D]

Explanation:
We have: l = 20 ft and lb = 680 sq. ft.
So, b = 34 ft.
$\therefore$ Length of fencing = $(l + 2b)$ = (20 + 68) ft = 88 ft.

(11) Two trains running in opposite directions cross a man standing on the platform in 27 seconds and 17 seconds respectively and they cross each other in 23 seconds. The ratio of their speeds is:

[A] 1 : 3

[B] 3 : 2

[C] 3 : 4

[D] None of these

Answer : [B]

Explanation:
Let the speeds of the two trains be x m/sec and y m/sec respectively.
Then, length of the first train = $27x$ metres,
and length of the second train = $17y$ metres.
$\therefore$ $\frac{27x + 17y}{x + y} = 23$

$\Rightarrow 27x + 17y = 23x + 23y$
$\Rightarrow 4x = 6y$
$\Rightarrow \frac{x}{y} = \frac{3}{2}$.

---

(12) A train passes a station platform in 36 seconds and a man standing on the platform in 20 seconds. If the speed of the train is 54 km/hr, what is the length of the platform?

[A] 120 m

[B] 240 m

[C] 300 m

[D] None of these

Answer : [B]

Explanation:
Speed = $\left(54 \times \frac{5}{18}\right)$ m/sec = 15 m/sec.

Length of the train = (15 x 20)m = 300 m.
Let the length of the platform be x metres.
Then, $\frac{x + 300}{36} = 15$

$\Rightarrow x + 300 = 540$
$\Rightarrow x = 240$ m.

---

(13) A train 110 metres long is running with a speed of 60 kmph. In what time will it pass a man who is running at 6 kmph in the direction opposite to that in which the train is going?

[A] 5 sec

[B] 6 sec

[C] 7 sec

[D] 10 sec

Answer : [B]

Explanation:
Speed of train relative to man = (60 + 6) km/hr = 66 km/hr.
$= \left(66 \times \frac{5}{18}\right)$ m/sec

$= \left(\frac{55}{3}\right)$ m/sec.

$\therefore$ Time taken to pass the man = $\left(110 \times \frac{3}{55}\right)$ sec = 6 sec.

---

(14) A goods train runs at the speed of 72 kmph and crosses a 250 m long platform in 26 seconds. What is the length of the goods train?

[A] 230 m

[B] 240 m

[C] 260 m

[D] 270 m

Answer : [D]

Explanation:

Speed = $\left(72 \times \frac{5}{18}\right)_{m/sec}$ = 20 m/sec.

Time = 26 sec.
Let the length of the train be x metres.
Then, $\frac{x + 250}{26} = 20$

$\Rightarrow x + 250 = 520$
$\Rightarrow x = 270.$

---

(15) How many seconds will a 500 metre long train take to cross a man walking with a speed of 3 km/hr in the direction of the moving train if the speed of the train is 63 km/hr?

[A] 25

[B] 30

[C] 40

[D] 45

Answer : [B]

Explanation:

Speed of the train relative to man = (63 - 3) km/hr

= 60 km/hr

$= \left(60 \times \frac{5}{18}\right)$ m/sec

$= \left(\frac{50}{3}\right)$ m/sec.

$\therefore$ Time taken to pass the man $= \left(500 \times \frac{3}{50}\right)$ sec

= 30 sec.

---

(16) The average of 20 numbers is zero. Of them, at the most, how many may be greater than zero?

[A] 0

[B] 1

[C] 10

[D] 19

Answer : [D]

Explanation:

Average of 20 numbers = 0.
$\therefore$ Sum of 20 numbers (0 x 20) = 0.

It is quite possible that 19 of these numbers may be positive and if their sum is a then 20th number is $(-a)$.

(17) The average weight of 8 person's increases by 2.5 kg when a new person comes in place of one of them weighing 65 kg. What might be the weight of the new person?

[A] 76 kg

[B] 76.5 kg

[C] 85 kg

[D] Data inadequate

[E] None of these

Answer : [C]

Explanation:
Total weight increased = (8 x 2.5) kg = 20 kg.
Weight of new person = (65 + 20) kg = 85 kg.

(18) The captain of a cricket team of 11 members is 26 years old and the wicket keeper is 3 years older. If the ages of these two are excluded, the average age of the remaining players is one year less than the average age of the whole team. What is the average age of the team?

[A] 23 years

[B] 24 years

[C] 25 years

[D] None of these

Answer : [A]

Explanation:
Let the average age of the whole team by x years.
$\therefore$ $11x - (26 + 29) = 9(x - 1)$
$\Rightarrow 11x - 9x = 46$
$\Rightarrow 2x = 46$
$\Rightarrow x = 23$.
So, average age of the team is 23 years.

(19) In Arun's opinion, his weight is greater than 65 kg but less than 72 kg. His brother doest not agree with Arun and he thinks that Arun's weight is greater than 60 kg but less than 70 kg. His mother's view is that his weight cannot be greater than 68 kg. If all are them are correct in their estimation, what is the average of different probable weights of Arun?

[A] 67 kg.

[B] 68 kg.

[C] 69 kg.

[D] Data inadequate

[E] None of these

Answer : [A]

Explanation:
Let Arun's weight by X kg.
According to Arun, $65 < X < 72$

According to Arun's brother, 60 < X < 70.
According to Arun's mother, X <= 68
The values satisfying all the above conditions are 66, 67 and 68.
$\therefore$ Required average = $\left(\frac{66 + 67 + 68}{3}\right) = \left(\frac{201}{3}\right)$ = 67 kg.

---

(20) A car owner buys petrol at Rs.7.50, Rs. 8 and Rs. 8.50 per litre for three successive years. What approximately is the average cost per litre of petrol if he spends Rs. 4000 each year?

[A] Rs. 7.98

[B] Rs. 8

[C] Rs. 8.50

[D] Rs. 9

Answer : [A]

Explanation:

Total quantity of petrol consumed in 3 years = $\left(\frac{4000}{7.50} + \frac{4000}{8} + \frac{4000}{8.50}\right)$ litres

= $4000\left(\frac{2}{15} + \frac{1}{8} + \frac{2}{17}\right)$ litres

= $\left(\frac{76700}{51}\right)$ litres

Total amount spent = Rs. (3 x 4000) = Rs. 12000.
$\therefore$ Average cost = Rs. $\left(\frac{12000 \times 51}{76700}\right)$ = Rs. $\frac{6120}{767}$ = Rs. 7.98
