

Daily Dose of Aptitude-29-06-2019

1. Each dimension in metres of a rectangular solid is an integer less than 17, the volume of the solid is 3120 cubic metre. If the height of the solid is 16m and length of the solid is 15 metre, what is the surface area (in sq. metre) of the solid?

- (a) 1826
- (b) 1268
- (c) 1395
- (d) 1286

2. Find the LCM of?

$\frac{2}{3}$, $\frac{4}{6}$, $\frac{8}{27}$

- (a) $\frac{2}{27}$
- (b) $\frac{8}{3}$
- (c) $\frac{2}{3}$
- (d) $\frac{8}{27}$

3. A certain number of people were supposed to complete a work in 24 days. The work, however, took 32 days, since 9 people were absent throughout. How many people were supposed to be working originally?

- (a) 32
- (b) 27
- (c) 36
- (d) 30

4. Ramesh is twice as good a workman as Sunil and finishes a piece of work in 3 hours less than Sunil. In how many hours they together could finish the half of the work?

- (a) $2\frac{2}{3}$ hr
- (b) 1 hr
- (c) $1\frac{1}{3}$ hr
- (d) Data inadequate

5. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:

- (a) 123
- (b) 122
- (c) 121
- (d) 120

6. A Man travelled a distance of 61 km in 9 hours. He travelled partly on foot at 4 km/hr and partly on bicycle at 9 km/hr. What is the distance travelled on foot?

- (a) 16 km
- (b) 14 km
- (c) 12 km
- (d) 10 km

7. Two trains are moving on two parallel tracks but in opposite directions. A person sitting in the train moving at the speed of 80 km/hr passes the second train in 18 seconds. If the length of the second train is 1000 m, its speed is?

- (a) 100 km/hr
- (b) 120 km/hr
- (c) 140 km/hr
- (d) 150 km/hr

8. In a class of 42 students, the average age of all students is 16 years. Due to admission of 6 new students in the class the average age increases by $\frac{1}{2}$ years. Find the average age of new students admitted.

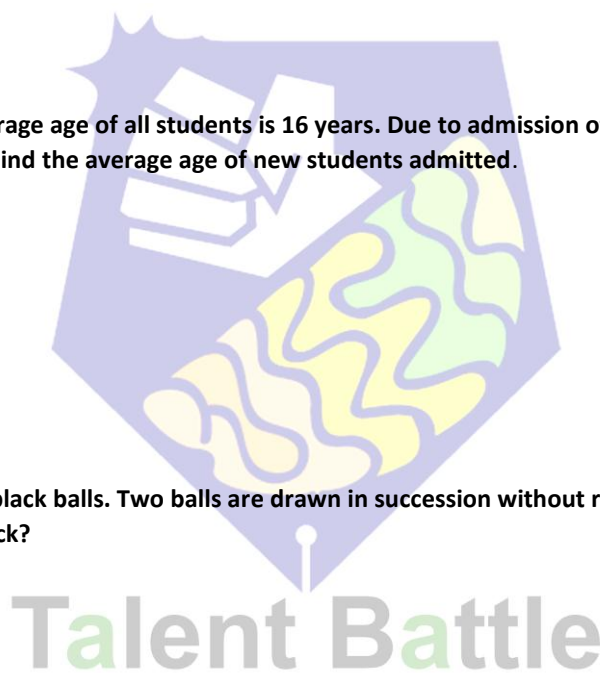
- (a) 20 years
- (b) 22 years
- (c) 18 years
- (d) 24 years

9. A bag contains 12 white and 18 black balls. Two balls are drawn in succession without replacement. What is the probability that first is white and second is black?

- (a) $\frac{36}{135}$
- (b) $\frac{36}{145}$
- (c) $\frac{18}{91}$
- (d) $\frac{30}{91}$

10. P and Q sit in a ring arrangement with 10 persons. What is the probability that P and Q will sit together?

- (a) $\frac{2}{11}$
- (b) $\frac{3}{11}$
- (c) $\frac{4}{11}$
- (d) $\frac{5}{11}$



ANSWERS AND SOLUTIONS:

Ans 1: (d)

Sol.

Let dimensions of rectangular solid are l , b & h metres respectively.

$$215 \times 16b = 3120$$

$$b = 13\text{m}$$

$$\text{Surface area} = 2 \times \{lb + bh + lh\}$$

$$= 2 \times \{195 + 13 + 16 + 15 \times 16\}$$

$$= 1286 \text{ m}^2$$

Ans 2: (b)

LCM of fraction = LCM of numerator / HCF of denominator

LCM of numerator = 8, HCF of denominator = 3

$$= 8/3$$

Ans 3: (c)

Sol: Let X people were supposed to work

$$(X-9) \times 32 = X \times 24$$

$$8x = 9 \times 32$$

$$x = 36$$

Ans 4: (b)

Sol: Let Sunil finishes the work in 6 hours

Hence, Ramesh finishes it in 3 hours

They together finishes half of the work in

$$(6 \times 3) / (9 \times 2) = 1 \text{ hours}$$

Ans 5: (c)

$$\text{Sol: Amount} = \text{Rs. } [1600 \times (1 + 5/200)^2 + 1600 \times (1 + 5/200)]$$

$$= \text{Rs. } 3321$$

$$\text{So CI} = \text{Amount} - \text{Principal}$$

$$= \text{Rs. } 3321 - \text{Rs. } 3200 = \text{Rs. } 121$$

Ans 6: (a)

Let the time in which he travelled on foot = x hour

Time for travelling on bicycle = $(9 - x)$ hr

Distance = Speed * Time, and Total distance = 61 km

So,

$$4x + 9(9-x) = 61$$

$$5x = 20$$

$$x = 4$$

$$\text{So distance travelled on foot} = 4(4) = 16 \text{ km}$$

Ans 7: (b)

Sol: Let the speed of second train be x m/s.

$$80 \text{ km/h} = (80 \times 5) / 18 \text{ m/s}$$

According to the question $1000 / (x + (80 \times 5) / 18) = 18$

$$100 - 18x + 400$$

$$x = 666 / 18 \text{ m/s}$$

$$= 600 / 18 \times 18 / 5 \text{ km/h} = 120 \text{ km/h}$$



Ans 8: (a)

Sol: Let average of new students is x years

$$\text{ATQ, } (42 \times 16 + 6x)/48 = 16.5$$

$$X = 120/6$$

$$x = 20$$

Ans 9: (b)

Sol: The probability that first ball is white = $12C1/30C1 = 2/5$

Since, the ball is not replaced; hence the number of balls left in bag is 29.

Hence the probability the second ball is black = $18C1/29C1 = 18/29$

Required probability = $2/5 \times 18/29 = 36/145$

Ans 10: (a)

Sol: $n(S)$ = number of ways of sitting 12 persons at round table:

$$= (12-1)! = 11!$$

Since two persons will be always together, then number of persons:

$$= 10 + 1 = 11$$

So, 11 persons will be seated in $(11-1)! = 10!$ ways at round table and 2 particular persons will be seated in $2!$ ways.

$n(A)$ = The number of ways in which two persons always sit together = $10! \times 2$

So probability = $10! \times 2! / 11! = 2/11$

