

## Capgemini Test 3

1

### **SECTION A**

Which one of the following is not a prime number?

- A. 61
- B. 71
- C. 31
- D. 91

Explanation: 91 is divisible by 7. So, it is not a prime number

2

Four bells toll at intervals of 15, 18, 24 and 31 minutes respectively. At a certain time, they begin to roll together after what, least time interval if time (in minutes) will they toll together again?

- A. 1440
- B. 900
- C. 1660
- D. 1335

Explanation:

Taking LCM of 15, 18, 24 and 32 is 1440 minutes

3

Last year Mr. Basu bought two scooters. This year he sold both of them for Rs 30,000 each. On one, he earned 20% profit, and on the other he made a 20% loss. What was

his net profit or loss?

- A. He gained less than Rs 2000
- B. He gained more than Rs 2000
- C. He lost less than Rs 2000
- D. He lost more than Rs 2000

Explanation:

By the direct approach, % Loss =  $x^2 / 100 = 20^2 / 100 = 4$

Actual loss = Rs 60,000 × 4%

= Rs 2400 and  $(2400 > 2000)$

4

Out of two-thirds of the total number of basket-ball matches, a team has won 17 matches and lost 3 of them. What is the maximum number of matches that the team can lose and still win three-fourths of the total number of matches, if it is true that no match can end in a tie?

- A. 4  
 B. 6  
 C. 5  
 D. 3

Explanation: The team has already played  $17$  (won) +  $3$  (lost) =  $20$  matches. These constitute two-thirds of the total matches.

Thus the total number of matches is  $30$ . If the team is supposed to win three-fourths of these, it has to win  $22.5$ , i.e.  $23$  matches in all. There are  $(30 - 20) = 10$  matches remaining. So the team has to win  $(23 - 17) = 6$  of these  $10$  matches, i.e. it can lose no more than  $(10 - 6) = 4$  matches.

5

In an election contested by two parties, Party D secured 12% of the total votes more than Party R. If party R got 132,000 votes, by how many votes did it lose the election?

- A. 300,000  
 B. 168,000  
 C. 36,000  
 D. 24,000

Explanation: Let the percentage of the total votes secured by Party D be  $x\%$

Then the percentage of total votes secured by Party R =  $(x - 12)\%$

As there are only two parties contesting in the election, the sum total of the votes secured by the two parties should total up to 100%

i.e.,  $x + x - 12 = 100$

$2x - 12 = 100$

or  $2x = 112$  or  $x = 56\%$ .

If Party D got 56% of the votes, then Party got  $(56 - 12) = 44\%$  of the total votes.

44% of the total votes = 132,000

T  $132,000 \times 100 / 44 = 300,000$  votes.

Votes secured by D = 168,000

Ans: Votes secured by D - Votes secured by R = 36,000

6

If a number 774958A96B is to be divisible by 8 and 9, the values of A and B, respectively, will be:

- A. 7,8
- B. 8,0
- C. 5,8
- D. NONE

Explanation: Since the number is divisible by 8, its last 3 digits are divisible by 8. 960 or 968 are the two possible options, so B is either 0. or 8. Since the number is divisible by 9, the sum of its digits is divisible by 9. Adding the digits, we get  $(55 + A + B)$  is a multiple of 9. If  $B = 8$ , a must be 9, but no such option is given. If  $B = 0$ ,  $A = 8$ . then

$$(A, B) = (8, 0)$$

7

In the first 10 overs of a cricket game, the run rate was only 3.2. What should be the run rate in the remaining 40 overs to reach the target of 282 runs?

- A. 6.25
- B. 6.75
- C. 6.5
- D. NONE

Explanation: Required run rate =  $[282 - (3.2 \times 10)]/40 = 250/40 = 6.25$

8

If  $S_n$  denotes the sum of the first  $n$  terms in an Arithmetic Progression and  $S_1: S_4 =$

1: 10 then the ratio of first term to fourth term is:

- A. 1: 3
- B. 2: 3
- C. 1: 4
- D. 1: 5

Explanation:

Use  $S_n = (n/2)[2a + (n-1)d]$  and  $T_n = a + (n - 1) d$

$$S_1/S_4 = 1/10 = a/ (4/2) [2a + 3d]$$

$$6a = 6d \text{ or } a = d$$

$$\text{Therefore } T_1/T_4 = a/ (a+ 3d) = a/4a = 1/4$$

9

Excluding stoppages, the speed of a bus is 54kmph and including stoppages, it is 45 kmph. For how many minutes the bus stop per hour?

- ( ) A. 9  
 ( ) B. 10  
 ( ) C. 12  
 ( ) D. 20

Explanation: Due to stoppage it covers 9km less

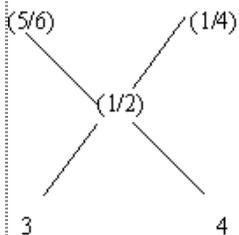
Time taken to cover 9km =  $(9/54)*60 = 10$  min

10

Two liquids A and B are in the ratio 5: 1 in container 1 and in container 2, they are in the ratio 1: 3. In what ratio should the contents of the two containers be mixed so as to obtain a mixture of A and B in the ratio 1: 1?

- ( ) A. 2: 3  
 ( ) B. 4: 3  
 ( ) C. 3: 2  
 ( ) D. 3:4

Explanation: In container 1, the ratio of liquid A to the total liquid is  $5/ (5 + 1) = 5/6$ . In container 2, this ratio is  $1/ (1 + 3) = 1/4$ . In the final mixture, this ratio will be  $1/ (1 + 1) = 1/2$ . Allegation as shown, we get the required ratio as 3:



11

The price of a Maruti car rises by 30% while the sales of the car came down by 20%. What is the percent change in the total revenue?

- ( ) A. -4  
 ( ) B. -2  
 ( ) C. +4  
 ( ) D. 0

Explanation:

The price becomes 1.3p from the original price p, while the sales come down to 0.8s from the original sales s.

Thus the % change in the revenue is  $[(1.04 - 1.00) ps/ps] * 100 = 4\%$ .

12

In triangle ABC, angle B is a right angle. If AC is 6cm, and D is the mid-point of side AC, the length of BD is

- A. 4cm
- B. 6cm
- C. 3cm
- D. 3.5cm

Explanation:

In a right angled triangle, the median is half the length of the hypotenuse =  $\frac{1}{2}(6) = 3$  cm.

13

Average cost of 5 apples and 4 mangoes is Rs. 36. The average cost of 7 apples and 8 mangoes is Rs. 48. Find the total cost of 24 apples and 24 mangoes.

- A. 1044
- B. 2088
- C. 720
- D. 324

Explanation:

Average cost of 5 apples and 4 mangoes = Rs. 36

Total cost =  $36 * 9 = 324$

Average cost of 7 apples and 8 mangoes = 48

Total cost =  $48 * 15 = 720$

Total cost of 12 apples and 12 mangoes =  $324 + 720 = 1044$

Therefore, cost of 24 apples and 24 mangoes =  $1044 * 2 = 2088$

14

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. None of these

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

15

How many numbers between 1 to 1000(both excluded) are both squares and cubes?

- A. 3  
 B. 1  
 C. 2  
 D. NONE

Explanation:

Try with whole cubes as they are fewer in number

$$4^3 = 64 \text{ and } 8^2 = 64$$

i.e. 64 only

16

I bought 5 pens, 7 pencils and 4 erasers. Rajan bought 6 pens, 8 erasers and 14 pencils for an amount which was half more than what I had paid. What percent of the total amount paid by me was paid for the pens?

- A. 37.5%  
 B. 62.5%  
 C. 50%  
 D. None of these

Explanation:

Let one pen, one pencil and one eraser cost  $n$ ,  $p$  and  $r$  units respectively. Let the amount paid by me be  $A$  units.

$$\text{I pay } (5n + 7p + 4r) = A \text{ ..... Eqn. (1)}$$

While Rajan pays  $(6n + 14p + 8r) = 1.5A$  ..... Eqn. (2). Multiply equation (1) by 2.

We Get  $(10n + 14p + 8r) = 2A$  ..... Eqn. (3). Comparing equations (2) and (3), we see that while Rajan gets 4 pens less, he pays  $0.5A$  units less. Thus,  $A$  = the price of 8 pens. Therefore the % of the total price paid by me initially, which was used for pens is  $(5/8) (100) = 62.5\%$ .

17

Two people agree to meet on January 9, 2005 between 6.00 P.M. to 7.00 P.M., with the understanding that each will wait no longer than 20 minutes for the other. What is the probability that they will meet?

- A.  $5/9$
- B.  $7/9$
- C.  $2/9$
- D.  $4/9$

Explanation:

They can meet when A comes between 6: 00 = 6: 40.

And so B can join him between 6: 20 = 7: 00

Similarly, the process can be reversed

Therefore  $p = (40 / 60)^2 = 4/9$

18

Find the series 42 40 38 35 33 31 28

- A. 25 22
- B. 26 23
- C. 26 24
- D. 25 23

Explanation:

This is an alternating subtraction series in which 2 is subtracted twice, then 3 is subtracted once, then 2 is subtracted twice, and so on.

19

Steel Express runs between Tatanagar and Howrah and has five stoppages in between. Find the number of different kinds of one-way second class ticket that Indian

Railways will have to print to service all types of passengers who might travel by Steel Express?

- A. 49
- B. 42
- C. 21
- D. 7

Explanation:

We have 5 stations + (T + H) = 7 stations. Out of the 7 stations, we have to print tickets connecting any 2;

i.e. arrangements of 7 things, any 2 at a time, i.e. No. of tickets =  ${}^7P_2 = 42$

**20**

The horizontal distance of a kite from the boy flying it is 30 m and 50 m of cord is out from the roll. If the wind moves the kite horizontally at the rate of 5 km per hour directly away from the boy, how fast is the cord being released?

- A. 3 km per hour
- B. 4 km per hour
- C. 5 km per hour
- D. 6 km per hour

Explanation:

$$y/x = 5/3$$

$$dy/dx > 1, \text{ i.e. } > 5, \text{ i.e. } 6$$

**21**

Two players A and B play the following game. A selects an integer from 1 to 10, inclusive of both. B then adds any positive integer from 1 to 10, both inclusive, to the

number selected by A. The player who reaches 46 first wins the game. If the game is played properly, A may win the game if:

- A. A selects 8 to begin with
- B. A selects 2 to begin with
- C. A selects any number greater than 5
- D. None of the above

Explanation:

Since repetition of numbers is allowed, both are equally free to win the game

**22**

A watch dealer incurs an expense of Rs 150 for producing every watch. He also incurs an additional expenditure of Rs. 30,000; this is independent of the number of watches produced. If he is able to sell a watch during the season, he sells it for Rs. 250. If he fails to do so, he has to sell each watch for Rs. 100. . If he is able to sell only 1200 out of the 1500 watches he has made in the season, then in the season he has made a profit of:

- A. Rs. 90,000
- B. Rs. 75,000
- C. Rs. 45,000
- D. Rs 60,000

Explanation:

One each of the 1200 watches that he sells in the season, he makes a profit of Rs. 100 (i.e. Rs. 250 - Rs. 150). On each of the 300 (i.e. 1500 - 1200) watches that are not sold, he incurs a loss of Rs. 150, which is the manufacturing cost. His additional expense is Rs. 30,000 (given). Thus his net profit in the season is Rs.  $(1, 20,000 - 45,000 - 30,000) = \text{Rs.}$

45,000.

**23**

Find the next term in series

5, 10, 13, 26, 28, 61, \_

- A. 64
- B. 122
- C. 12
- D. 128

Explanation:

Multiplied by 2 & increased by 3  $5 * 2 = 10$ ,  $10 + 3 = 13$ ,  $13 * 2 = 26$ ,  $26 + 3 = 29$  So missing number is  $61 * 2 = 122$

**24**

Distance between A and B is 72 km. Two men started walking from A and B at the same time towards each other. The person who started from A travelled uniformly with average speed 4 kmph. While the other man travelled with varying speeds as follows: In first hour his speed was 2 kmph, in the second hour it was 2.5 kmph, in the third hour it was 3 kmph, and so on. When will they meet each other?

- A. 7 hours
- B. 10 hours
- C. 35 km from A
- D. midway between A & B

Explanation:

Let  $x$  and  $y$  be the persons who started from A and B respectively.

Midway between A and B means 36 km. From A and B both.  $x$  will take 9 hours to reach the midpoint. In 9 Hours  $y$  will also cover  $2 + 2.5 + 3 + 3.5 + 4 + 4.5 + 5 + 5.5 + 6 = 36$  km. Thus  $y$  will also reach the midpoint at the same time.

**25**

The sum of ages of 5 children born at the interval of 3 years each is 50 years. What is The age of youngest child?

- A. 4 years
- B. 8 years
- C. 10 years
- D. none of these

Explanation:

Let the ages of children be  $x$ ,  $(x + 3)$ ,  $(x + 6)$ ,  $(x + 9)$  and  $(x + 12)$  years.

Then,  $x + (x + 3) + (x + 6) + (x + 9) + (x + 12) = 50$

$X = 4$

**26**

**SECTION B**

**DIRECTIONS for Questions 26 and 27: Answer the questions on the basis of the information given below.**

New Age Consultants have three consultants Gyani, Medha and Buddhi. The sum of the number of projects handled by Gyani and Buddhi individually is equal to the number of projects in which Medha is involved. All three consultants are involved together in 6 projects. Gyani works with Medha in 14 projects. Buddhi has 2 projects with Medha but without Gyani, and 3 projects with Gyani but without Medha. The total number of projects for New Age Consultants is one less than twice the number of projects in which more than one consultant is involved.

What is the number of projects in which Medha alone is involved?

- Uniquely equal to zero
- Uniquely equal to 1
- Uniquely equal to 4
- Cannot be determined uniquely

Explanation:

As per the given data we get the following:

$$G + B = M + 16$$

$$\text{Also, } M + B + G + 19 = (2 \times 19) - 1$$

$$\text{i.e. } (G + B) = 18 - M$$

$$\text{Thus, } M + 16 = 18 - M$$

$$\text{i.e. } M = 1$$

**27**

What is the number of projects in which Gyani alone is involved?

- A. Uniquely equal to zero
- B. Uniquely equal to 1
- C. Uniquely equal to 4
- D. Cannot be determined uniquely

Explanation:

Putting the value of M in either equation, we get  $G + B = 17$ .

Hence neither of two can be uniquely determined.

28

**DIRECTIONS for Questions 28 and 29: Answer the questions on the basis of the information given below.**

Five horses, Red, White, Grey, Black and Spotted participated in a race. As per the rules of the race, the persons betting on the winning horse get four times the bet amount and those betting on the horse that came in second get thrice the bet amount. Moreover, the bet amount is returned to those betting on the horse that came in third, and the rest lose the bet amount. Raju bets Rs. 3000, Rs. 2000 Rs. 1000 on Red, White and Black horses respectively and ends up with no profit and no loss.

Which of the following cannot be true?

- At least two horses finished before Spotted
- Red finished last
- There were three horses between Black and Spotted
- There were three horses between White and Red

Explanation:

If we consider option 4 to be true, then either the White or Red horse will finish first. It means that the amount Raju receives at the end of the race will be at least Rs. 8000 or Rs. 12000 (depending on which of the two horses finish first). However, his investment at the start of the race was only Rs. 6000. So, his profit could never be zero; in the worst scenario he will at least make Rs. 2000. Therefore Option D cannot be true. Hence, option D.

29

Suppose, in addition, it is known that Grey came in fourth. Then which of the following cannot be true?

- Spotted came in first
- Red finished last
- White came in second
- Black came in second

Explanation:

We solve this question by options. If we consider option 3 to be true, then White finishes second and one of the Red or Black horses will come in the first or third positions. With White at the second position, the amount Raju receives at the end of the race will be at least Rs. 6000, and from Red or Black he will earn some money. Therefore, the total money Raju receives will be more than Rs. 6000. Since his investment at the start of the race was only Rs. 6000, his profit could never be zero. Therefore Option (3) cannot be

true.

**30**

**DIRECTIONS for Questions 30 and 32: Answer the questions on the basis of the information given below.**

1. There are three houses on each side of the road.
2. These six houses are labeled as P, Q, R, S, T and U.
3. The houses are of different colors, namely, Red, Blue, Green, Orange, Yellow and white.
4. The houses are of different heights.
5. T, the tallest house, is exactly opposite to the Red coloured house.
6. The shortest house is exactly opposite to the Green coloured house.
7. U, the Orange coloured house, is located between P and S.
8. R, the Yellow coloured house, is exactly opposite to P.
9. Q, the Green coloured house, is exactly opposite to U.
10. P, the White coloured house, is taller than R, but shorter than S and Q.

What is the colour of the tallest house?

- Red  
 Blue  
 Green  
 Yellow

Explanation:

We have to arrange six houses on opposite sides of a road. From condition (7), we can say that P, U and S lie on one side of the road as follows:

From condition (8) and (9) we can further complete the arrangement as follows. We have also used the colour of the house P from statement (10).

The only left house is definitely T. From conditions (5) and we can complete the arrangement as follows. From condition (6) it can be deduced that U is the shortest house. Also from the last condition it can be deduced that P is the fourth tallest, R is the fifth tallest and S and Q are second and third tallest not in that order. Filling all this data we can see the arrangement as follows:

P (White, Fourth Tallest)

R (Yellow, Fifth Tallest)

U (Orange, Shortest)

Q (Green, Second/Third Tallest)

S (Red, Second/Third Tallest)

T (Blue, First Tallest)

**31**

What is the colour of the house diagonally opposite to the Yellow coloured house?

A. White

B. Blue

C. Green

D. Red

Explanation:

The house diagonally opposite to the Yellow coloured house is S which has red colour. Hence, option D

**32**

Which is the second tallest house?

A. P

B. S

C. Q

D. cannot be determined

Explanation:

The second tallest house can be either S or Q. We cannot determine for sure which of them is the second tallest. Hence, option D

**33**

**DIRECTIONS for Questions 33 and 36: Answer the questions on the basis of the information given below.**

In a sports event, six teams (A, B, C, D, E and F) are competing against each other. Matches are scheduled in two stages. Each team plays three matches in Stage-I and two matches in Stage-II. No team plays against the same team more than once in the event. No ties are permitted in any of the matches. The observations after the completion of Stage-I and Stage-II are as given below. Stage-I:

One team won all the three matches.

Two teams lost all the matches.

D lost to A but won against C and F.

E lost to B but won against C and F.

B lost at least one match.

F did not play against the top team of Stage-I.

Stage-II:

The leader of Stage-I lost the next two matches.

Of the two teams at the bottom after Stage-I, one team won both matches, while the other lost both matches.

One more team lost both matches in Stage-II.

The team(s) with the most wins in the event is (are):

- A. A
- B. A & C
- C. F
- D. B & E

Explanation:

Stage I can be represented as:

D -- A  
 B -- A  
 D - C  
 A -- C  
 D -- F  
 F -- B  
 E -- B  
 E -- C  
 E - F

since no team plays against the same team more than once in the event

Stage II can be represented as:

A -- E  
 A -- F  
 F -- C  
 B -- C  
 D -- B  
 D - E

Now, we can calculate the number of times each team has won.

Team	Stage I	Stage II	Total
A	3	0	3
B	2	2	4
C	0	0	0
D	2	0	2
E	2	2	4
F	0	2	2

It can be observed from the above table that B and E have most wins in the event.

Hence, option D

**34**

The two teams that defeated the leader of Stage-I are:

- A. F & D
- B. E & F
- C. B & D
- D. E & D

Explanation:

E and F defeated A. Hence, option B.

**35**

The only team(s) that won both the matches in Stage-II is (are):

- A. B
- B. E & F
- C. A, E & F
- D. B, E & F

Explanation:

B, E and F are the three teams that won both matches in stage II. Hence, option D.

**36**

The teams that won exactly two matches in the event are:

- A. A, D & F
- B. D & E
- C. E & F
- D. D, E & F
- E. D & F

Explanation:

From the table it is clear that the team that won exactly two matches in the event is D and F. Hence, option E.

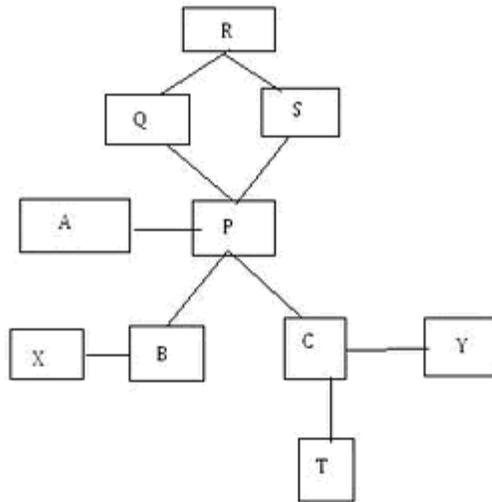
37

**DIRECTIONS** for Questions 37 and 39: Answer the questions on the basis of the information given below.

A visits Vizag where his brother P resides. P stays with his father Q and mother S. P's grandfather, R also stays with him. P has two children B and C. B's husband is X. C is married to Y, who is a wrestler. C's son T welcomed A on his visit.

How is related to B?

- ( ) A. Niece
- ( ) B. Nephew
- ( ) C. Cousin
- ( ) D. son

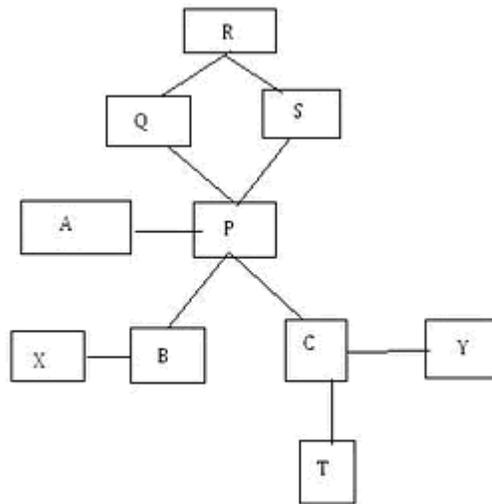


Explanation:

38

How is S related to C?

- ( ) Mother
- ( ) Grandmother
- ( ) Aunt
- ( ) Cannot be determined

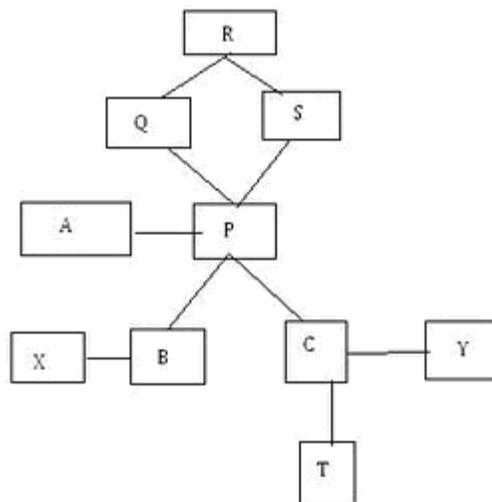


Explanation:

39

How is P related to X?

- A. Mother-in-law
- B. Mother
- C. Father-in-law
- D. Cannot be determined



Explanation:

40

**DIRECTIONS** for Questions 40 and 42: Answer the questions on the basis of the information given below.

"In a class of 70 students, 30 failed in mathematics and 35 failed in Statistics. Ten students passed in both the subjects."

How many failed in both the subject?

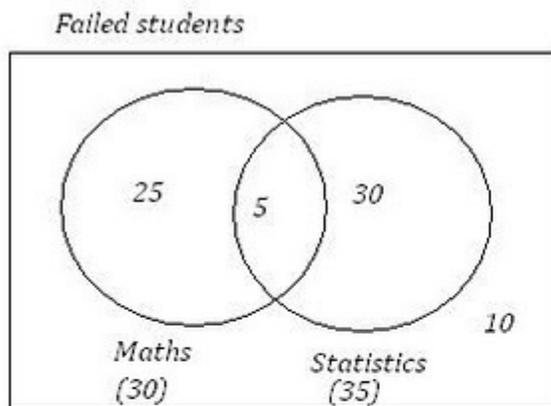
A. 65

B. 60

C. 5

D. 15

Explanation:

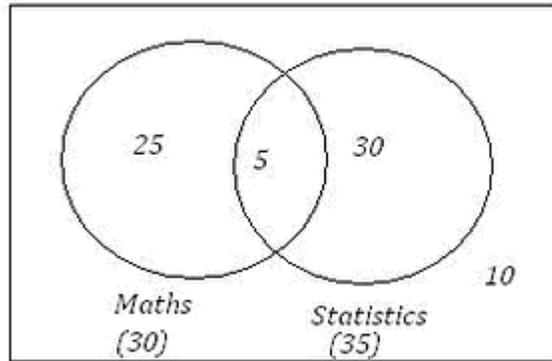


41

How many students passed only in Mathematics?

- A. 40
- B. 30
- C. 15
- D. 20

Failed students



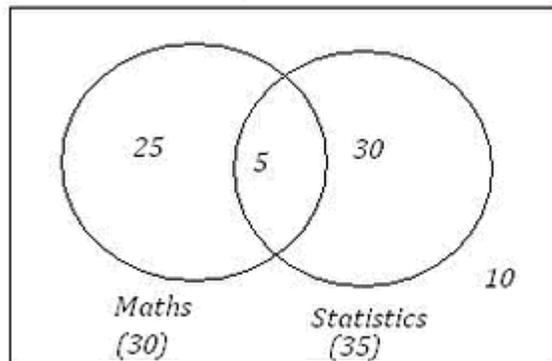
Explanation:

42

How many students passed in exactly one of the two subjects?

- A. 60
- B. 55
- C. 40
- D. 35

Failed students



Explanation:

43

In a particular school, sixty students were athletes. Ten among them were also among the top academic performers. How many top academic performers were in the school?

1. Sixty per cent of the top academic performers were not athletes.
  2. All the top academic performers were not necessarily athletes.
- ( ) A. using 1st Statement only  
( ) B. using 2nd statement only  
( ) C. using both 1st and 2nd statement  
( ) D. using 1st or 2nd statement  
( ) E. Cannot be answered even by using both the statement

Explanation:

From 1<sup>st</sup> Statement, 40% of the top academic performers were athletes.

If there are  $x$  top academic performers,  $10 = 0.4x$ . Therefore  $x = 25$  1<sup>st</sup> Statement is sufficient. Statement B does not give any useful information. Hence, option A.

44

Is  $a^{44} < b^{11}$ , given that  $a = 2$  and  $b$  is an integer?

1.  $b$  is even
  2.  $b$  is greater than 16
- ( ) A. using 1st Statement only  
( ) B. using 2nd statement only  
( ) C. using both 1st and 2nd statement  
( ) D. using 1st or 2nd statement  
( ) E. Cannot be answered even by using both the statement

Explanation:

Solution cannot be found by using only 1<sup>st</sup> Statement since  $b$  can take any even number 2,4,6 .....

But we can arrive at solution by using 2<sup>nd</sup> statement alone.

If  $b > 16$ , say  $b = 17$

Hence  $244 < (16 + 1)11$

$244 < (24 + 1)11$

45

What are the unique values of  $b$  and  $c$  in the equation  $4x^2 + bx + c = 0$  if one of the roots of the equation is  $(-1/2)$ ?

1. The second root is  $1/2$
  2. The ratio of  $c$  and  $b$  is 1
- ( ) A. using 1st Statement only  
 ( ) B. using 2nd statement only  
 ( ) C. using both 1st and 2nd statement  
 ( ) D. using 1st or 2nd statement  
 ( ) E. Cannot be answered even by using both the statement

Explanation:

Solution can be found using 1<sup>st</sup> Statement as we know both the roots for the equation (viz.  $1/2$  and  $-1/2$ ).

Also 2<sup>nd</sup> statement is sufficient. Since ratio of  $c$  and  $b = 1$ ,  $c = b$ .

Thus the equation =  $4x^2 + bx + b = 0$ . Since  $x = -1/2$  is one of the roots, substituting we get  $1 - b/2 + b = 0$  or  $b = -2$ . Thus  $c = -2$ .

46

AB is a chord of a circle.  $AB = 5$  cm. A tangent parallel to AB touches the minor arc AB at E. What is the radius of the circle?

1. AB is not a diameter of the circle
  2. The distance between AB and the tangent at E is 5 cm.
- ( ) A. using 1st Statement only  
 ( ) B. using 2nd statement only  
 ( ) C. using both 1st and 2nd statement  
 ( ) D. using 1st or 2nd statement  
 ( ) E. Cannot be answered even by using both the statement

Explanation:

We can get the answer using the second statement only. Let the radius be  $r$ .

$AC = CB = 2.5$  and using statement B,  $CE = 5$ , thus  $OC = (r - 5)$ .

Using Pythagoras theorem,  $(r - 5)^2 + (2.5)^2 = r^2$

We get  $r = 3.125$

47

D, E, F are the mid points of the sides AB, BC and CA of triangle ABC respectively. What is the area of DEF in square centimeters?

A. AD = 1 cm, DF = 1 cm and perimeter of DEF = 3cm

B. Perimeter of ABC = 6 cm, AB = 2 cm, and AC = 2 cm

- A. using 1st Statement only  
 B. using 2nd statement only  
 C. using both 1st and 2nd statement  
 D. using 1st or 2nd statement  
 E. Cannot be answered even by using both the statement

Explanation:

The question tells us that the area of triangle DEF will be 1/4th the area of triangle ABC. Thus by knowing either of the statements, we get the area of the triangle DEF.

48

What is the Cost Price of the article?

1. After selling the article, a loss of 25% on Cost Price incurred.

2. The Selling Price is three-fourths of the Cost Price.

- A. using 1st Statement only  
 B. using 2nd statement only  
 C. using both 1st and 2nd statement  
 D. using 1st or 2nd statement  
 E. Cannot be answered even by using both the statement

Explanation:

We are required to find out the exact cost price. Both the statements give the same information, i.e. the SP is 0.75 times the CP

49

A tractor travelled a distance of 5 m. What is the radius of the rear wheel?

1. The front wheel rotates "N" times more than the rear wheel over this distance.
  2. The circumference of the rear wheel is "t" times that of the front wheel.
- ( ) A. using 1st Statement only  
( ) B. using 2nd statement only  
( ) C. using both 1st and 2nd statement  
( ) D. using 1st or 2nd statement  
( ) E. Cannot be answered even by using both the statement

Explanation:

To find the radius of the rear wheel, we need to know the numerical value of its circumference. From 1<sup>st</sup> statement, we get a relation between the circumferences of the two wheels in terms of "N". From 2<sup>nd</sup> statement, we get similar information in terms of "t". Thus, the radius cannot be determined from the given data

50

What is the Selling Price of the article?

1. The profit on Sales is 20%.
  2. The profit on each unit is 25% and the Cost Price is Rs. 250.
- ( ) A. using 1st Statement only  
( ) B. using 2nd statement only  
( ) C. using both 1st and 2nd statement  
( ) D. using 1st or 2nd statement  
( ) E. Cannot be answered even by using both the statement

Explanation:

By default, the profit is always mentioned as a % of the CP. From 2<sup>nd</sup> statement, we see that the profit on the article is 25% of Rs. 250, which is Rs. 62.50. So the SP can be determined with the help of 2<sup>nd</sup> statement alone.