Set 1

Wipro resets percentile score each year on 1st January.

1. The cost price of 10 articles is equal to the selling price of 9 articles. find the profit percent.
a. 101/9 % b. 100/9 % c. 102/9 % d. 103/9 %

Ans: 100/9 %

Let Cost Price be x and selling price be y
Then given that cost price of 10 articles is equal to the selling price of 9 articles
That means 10x=9y
Y= 10x/9
Profit percent = ((selling price – cost price)/cost price) * 100
= 100/9 %

2. The ratio of radii of two right circular cylinders is 6:7 and their heights are in the ratio 5:9. The ratio of their respective curved surface areas is
a. 14:15 b. 17:19 c. 23:29 d. 10:21

Ans: 10 : 21

Curved surface area of a cylinder = 2 * Pi * r * h
Ratio = (6/7) * (5/9) = 10:21

3. In how many ways can the 7 letters A,B,C,D,E,F and G be arranged so that C and E never together.
a. 5040 b. 6480 c. 3600 d. 1440

Ans: 3600

C and E never together = Total arrangements – C and E together
Total arrangements are 7!
C and E together = pack c and e into one unit + 5 other alphabets = 6! 2! (2! Is two arrange c and e internally)
C and E never together = Total arrangements – C and E together = 7! – 6! 2! = 3600

4. How many numbers are there in all from 4000 to 4999 (both 4000 and 4999 included) having at least one of their digits repeated?
a. 356 b. 216 c. 496 d. 504

Ans: 496

Atleast one of their digits repeated = Total numbers – None of the digits repeated
Total numbers from 4000 to 4999 = 1000
None of the digits repeated = _ _ _ _
There are total 4 places
1st place is filled with 4 only. So only one choice
2nd place is filled with any 9 digits except 4 as we have used 4 in 1st place. So 9 choices
Similarly 3rd place is filled with any 8 digits. So we have 8 choices
4th place is filled with any 7 digits. So we have 7 choices.
So total arrangements = 1 * 9 * 8 * 7 = 504
Ans= 1000 – 504 = 496

5. if 1/2x +1/4x+1/8x=14 Then the value of x is:
a. 8 b. 12 c. 4 d. 16

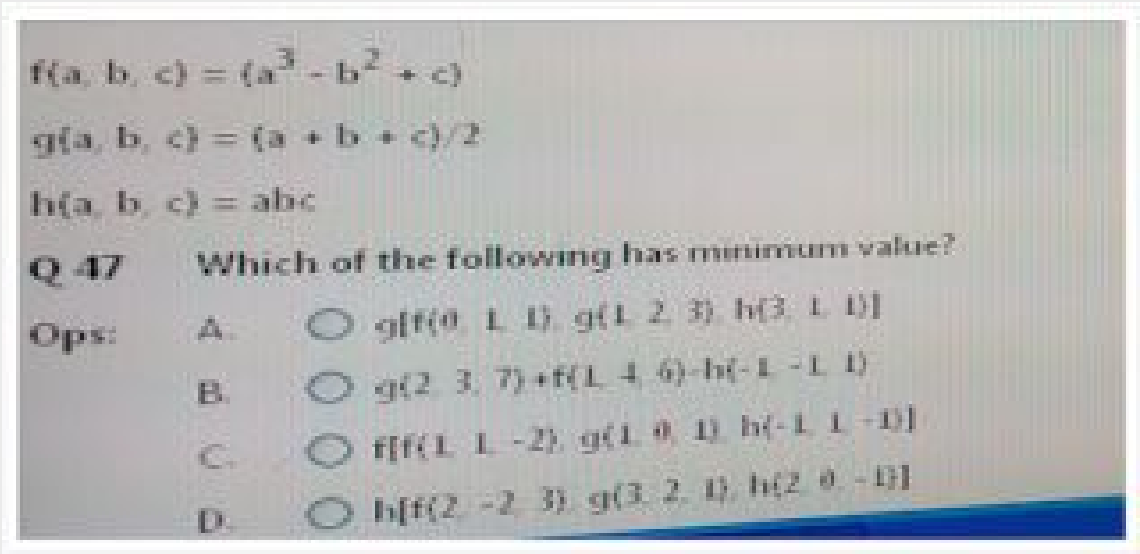
Ans: x = 16

6. Which of the following expressions will always be true?

A. $x^{2/3} = \sqrt{x^3}$ B $x^{2/3} > \sqrt[x]{x^2}$ C $x^{2/3} < \sqrt[x]{x^2}$ D $x^{2/3} = \sqrt[3]{x^2}$

Ans: D

Verify from options



Ans(C)

8. Find the value of h[f(1,2,3), g(2,1,-2), h(1,-1,-1)].

a. 0.5 b. none c. 1 d. 0

Ans(D)

9. A trapezium with an area of 5100 cm2 has the perpendicular distance between the two parallel sides of 60m . if one of the parallel sides be 40m. find the length of the other side.

a. 130 m b. 110 m c. 120 m d. 145 m

Ans: 130 m

Area of a trapezium = (1/2) (a+b) h

10. Find the simple interest on Rs. 306.25 from March 3rd to July 27th(In the same year) at 3.75 percent.

a. Rs. 4.57 b. Rs. 4.59 c. Rs. 4.53 d. Rs 4.58

Ans: 4.59

from March 3rd to July 27th(In the same year) = 146 days
(306.25 * 146 * 3.75)/ (365 * 100) = 4.59

11. Dhruv and Naksh drive at the speeds of 36 Kmph and 54 kmph respectively. If Naksh takes 3 hours lesser than what Dhruv takes for the same distance. Then distance is :
a. 324 km b. 524 km c. 320 km d. 420 km

Ans: 324 km

Let dhruv takes t hours then naksh takes t-3 hours
Because distance is same in both cases
So 36 * t = 54 (t-3)
t=9
ans: 36 * 9 = 324 km

12. The radius of wheel of axis's car is 50 cm. What is the distance that the car would cover in 14 revolutions?
a. 11 m b. 22 m c. 33 m d. 44 m

Ans: 44 m

Distance covered in one revolution is equal to wheel surface area = 2 * Pi * r
Distance covered in 14 revolutions = 14 (2 * (22/7) * 50) = 44000 cm= 44 m

13. P can do a piece of work in 5 days of 8 hours each and Q can do in 4 days of 6 hours each. How long will they take do it working 5 hours a day?
a. 2 days b. 3 days c. 4 days d. 5 days

Ans: 3 days

P can do in 5* 8 hours= 40 hours
Q can do in = 24 hours
Working together in one hour = (1/40) + (1/24) = 1/15
Total work can be finished in 15 hours
They 5 hours a day so total number of days = 15/5 = 3 days

14. Libra had three diamond weighing equal. One of the diamond fell and broke into 4 equal pieces weighing 20gm each. what was the total weight of three diamonds.
a. 200 gm b. 280 gm c. 320 gm d. 240 gm

Ans: 20 * 4 * 3 = 240 gm

16. if the antecedent and consequent of a ratio are increased by 5 and 6 respectively then the ratio is 5:6. find the original ratio. a. 5:6 b. 1:2 c. 2:3 d. 3:4
Ans: let's say original ratio is x:y
(x+5)/(y+6) = 5/6
Then x/y = 5/6

17. Rohit and Rahul start from the same point and move away from each other at right angle. After 4 hours they are 80 km apart. if the speed of Rohit is 4 kmph more than Rahul. what is the speed of Rohit?
a. 16 kmph b. 20 kmph c. 12 kmph d. none

Ans: x is the speed of rahul then (x+4) will be rohit speed

802 = (4x)2 + ((x+4)4)2
X=12
Rohit speed = 12 + 4 = 16kmph

18. Abhimanyu and supreet can together finish a work in 50 days. They worked together for 35 days and then supreet left. After another 21 days, Abhimanyu finished the remaining work. In how many days Abhimanyu alone can finish the work?
a. 70 days b. 75 days c. 80 days d. 60 days

Ans: 35 days worked together + 21 days abhimayu worked = finished the work

35(1/50) + 21(x) = 1
X=70 days
19. if two fair dice are thrown simultaneously. then what is the probability that sum of the numbers appearing on the top faces of the dice is less than 4? a. 6/14 b. none c. 1/12 d. 3/18
Ans: possible cases are (1,1) (1,2) and (2,1) = 3

3/36 = 1/12

20.

21. 3 individuals john wright, greg chappell and gary kristen are in the race for the appointment of new coach of team india. The probabilities of their appointment are 0.5, 0.3 and 0.2 respectively. If john wright is appointed then probability of ganguly appointed as a captain will be 0.7 and corresponding probability if greg chappell or gary kristen is appointed are 0.6 and 0.5 respectively. find the overall probability that ganguly will appointed as a captain.

a. 0.63 b. 0.35 c. 0.18 d. 0.89

Ans: 0.63

22. A man spends Rs 660 on tables and chairs. the price of each table is Rs. 150 and the price of each chair is Rs. 20. If he buys maximum number of tables, what is the ratio of chairs to tables purchased?

a. 2: 5 b. 3:5 c. 2:3 d. 3:4

4 tables + 3 chairs =660

Chairs to tables ratio is 3:4

23. two packets are available for sale.

packet a: peanuts 100 gms for Rs 48 only

packet b: peanuts 150 gms for Rs 72 only

which is a better buy?

a. both have the same value b. packet b c. data insufficient d. packet a

Ans: a. both have the same value

Packet-a : 1 gm cost = 48/100

Packet-b : 1 gm cost = 72/150

24.find the surface area of a piece of metal which is in the form of a parallelogram whose base is 10 cm and height is 6.4 cm

a. 64 cm2 b. 65 cm2 c. 45 cm2 d. 56 cm2

Ans:

25. Sridevi is younger than Rajeev by 4 years. if their ages are in the ratio of 7:9. how old is Sridevi?

Ans: if Sridevi is x then Rajeev will be (x+4)

x/(x+4) = 7/9

x=14

26. A sum of Rs. 900 amounts to Rs. 950 in 3 years at simple interest. If the interest rate is increased by 4%, it would amount to how much?

27. two trains for Palwal leave Kanpur at 10a.m and 10:30 am and travel at the speeds of 60 kmph and 75 kmph respectively. After how many kilometres from Kanpur will the two trains be together?

Ans: 150 km

28. (x + 1/x) = 6 the value of (x5 + 1/x5) = ?

Ans: 6726

29. In how many ways can 44 people be divided into 22 couples?

Ans: Short cut how many ways n people be divided into n/2 couples

(n!)/{(2!)n/2 (n/2)!} so ans is b. (44!)/{(2!)22 (22!)}

30. Find the remainder when (x3 + 4 x2 + 6 x - 2) is divided (x+5)

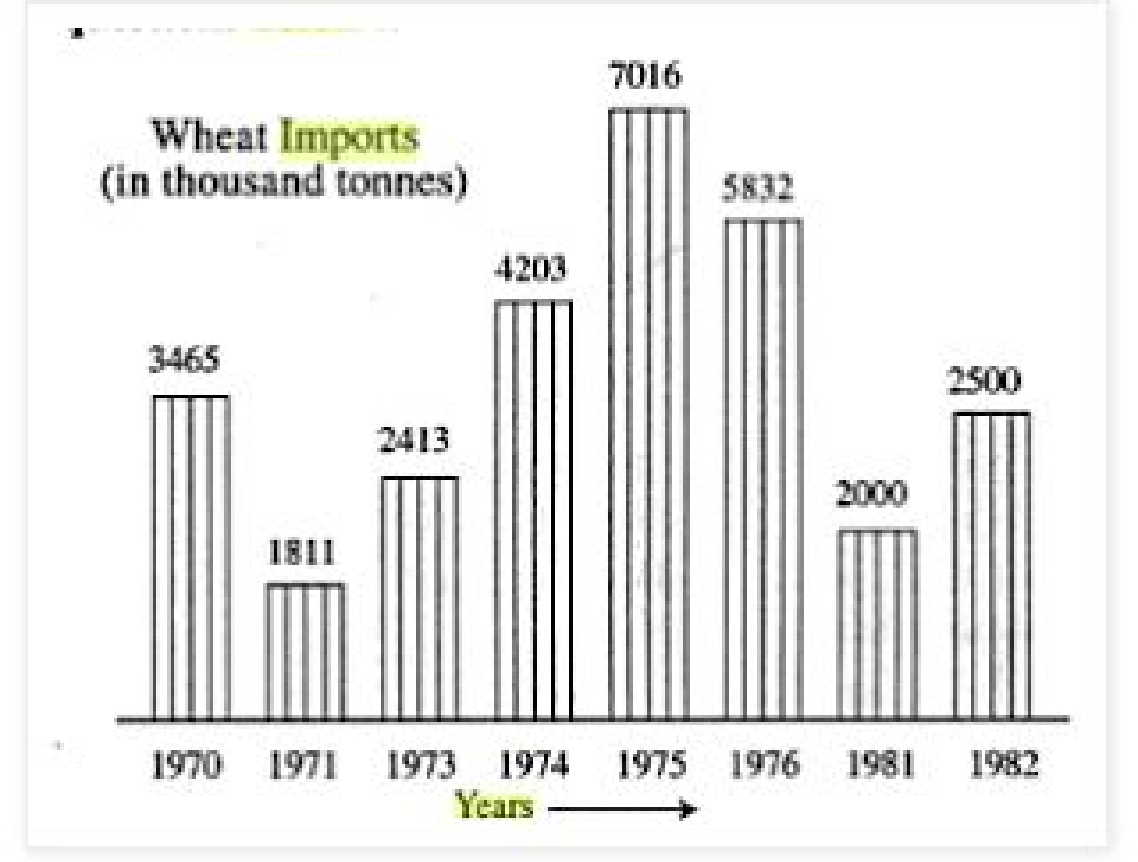
Ans: -57

31. a solid cylinder has total surface area of 462 cm2 . If total surface area of the cylinder is thrice of its curved surface area. then the volume of the cylinder is:

a. 539 cm3 b. 545 cm3 c. 531 cm3 d. 562 cm3

Ans:539

32.



In which year was there lowest wheat import?

a. 1973 b. 1974 c. 1975 d. 1982

Ans: a

33. What is the ratio of number of years which have imports above the average imports to those which have imports below the average imports?

a. 5:3 b. 2: 6 c. 3: 8 d. none

Ans: d

34. The increase in imports in 1982 was what percent of the imports in 1981?

a. 25% b. 5% c. 125% d. 80%

Ans: a

35. The section of a solid right circular cone by a plane containing vertex and perpendicular to base is an equilateral triangle of side 10 cm. find the volume of the cone?

a. 221.73 cm3 b.223.73 cm3 c.228.73 cm3 d.226.61 cm3

36. A sum of Rs 468.75 was lent out at simple interest and at the end of 1 year and 8 months, the total amount of Rs 500 is recieved. find the rate of interest.

a. 2% b. 4% c. 1% d. 3%

Ans: 4%

37.Consider the following two curves in the X-Y plane

y=(x3+x2+5)

y=(x2+x+5)

Which of the following statements is true for -2<= x <=2?

a. The two curves do not intersect. b. The two curves intersect thrice.

c. The two curves intersect twice. d. The two curves intersect once.

Ans: b

38.Give a model for maximising the profit in a company or minimising the loss in a conflict with optimisation techniques.where quantity f(x) is referred to as the object function while the vector 'x'consists of decision variables.

A. None of the mentioned options. B. x* =arg min f(x) C. x* =arg max f(x) D. x* =an-1+an arg min f(x)n

39. A positive integer is selected at random and is divided by 7,what is the probability that the remainder is 1?

A. 3/7 B. 4/7 C. 1/7 D. 2/7

Ans: 1/7

40. A mixture of 40 litres of salt and water contains 70%of salt.how much water must be added to decrease the salt percentage to 40%?

A. 40 litres B. 30 litres C. 20 litres D.2 litres

Ans: x=30

Ques. If LCM of two number is 693, HCF of two numbers is 11 and one number is 99, then find other

A. 34
B. 77
C. 12
D. 45

Answer: Option B

Explanation:

For any this type of question, remember
Product of two numbers = Product of their HCF and LCM

So Other number =
693×11/99
693×11/99
= 77

Ques. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

A. 276
B. 299
C. 322
D. 345
Answer: Option C

Explanation:

Clearly, the numbers are (23 x 13) and (23 x 14).

Larger number = (23 x 14) = 322

Ques. Find the greatest number which on dividing 1661 and 2045, leaves a reminder of 10 and 13 respectively

A. 125
B. 127
C. 129
D. 131

Answer: Option B

Explanation:

In this type of question, its obvious we need to calculate the HCF, trick is

HCF of (1661 - 10) and (2045 -13)
= HCF (1651, 2032) = 127

There are three numbers, these are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. What will be the sum of three numbers :

A. 80
B. 82
C. 85
D. 87

Answer: Option C

Explanation:

As given the questions these numbers are co primes, so there is only 1 as their common factor.
It is also given that two products have the middle number in common.
So, middle number = H.C.F. of 551 and 1073 = 29;
So first number is : 551/29 = 19
Third number = 1073/29 = 37
So sum of these numbers is = (19 + 29 + 37) = 85

Ques. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is:

A. 123
B. 127
C. 235
D. 305

Answer: Option B

Explanation:
Required number = H.C.F. of (1657 - 6) and (2037 - 5)
= H.C.F. of 1651 and 2032 = 127.

If the sum of two numbers is 55 and the H.C.F. and L.C.M. of these numbers are 5 and 120 respectively, then the sum of the reciprocals of the numbers is equal to:

A. 55/601
B. 601/55
C. 11/120
D. 120/11

Let the numbers be a and b.
Then, a + b = 55 and ab = 5 x 120 = 600.
The required sum = 1/a + 1/b = a + b/ab = 55/600 = 11/120

Ques : Choose the correct answer.
What is the value of 4^-2 ?
Option 1 : 1/4
Option 2 : 1/16
Option 3 : -16
Option 4 : None of these

Correct Op: 2

Ques : Choose the correct answer.
What is the value of (0.081)1/4?
Option 1 : 0.3
Option 2 : 0.03
Option 3 : 0.003
Option 4 : None of these

Correct Op: 1

Ques. A tyre has two punctures. The first puncture alone would have made the tyre flat in 9 minutes and the second alone would have done it in 6 minutes. If air leaks out at a constant rate, how long does it take both the punctures together to make it flat ?
3 ⅕ min
3 ⅖ min
3 ⅗ min

3 ⅗ min

Do not be confused, Take this question same as that of work done question's. Like work done by 1st puncture in 1 minute and by second in 1 minute.
Lets Solve it:

1 minute work done by both the punctures =
(1/9+1/6)=(5/18)

So both punctures will make the type flat in
(18/5)mins=3 ⅗ mins

Correct Op: 3

Ques. A is twice as good as workman as B and together they finish a piece of work in 18 days. In how many days will B alone finish the work.
27 days
54 days
56 days
68 days

Correct Op: 2

Answer: Option B

Explanation:

As per question, A do twice the work as done by B.
So A:B = 2:1
Also (A+B) one day work = 1/18

To get days in which B will finish the work, lets calculate work done by B in 1 day =
=(1/18∗1/3)=1/54

[Please note we multiplied by 1/3 as per B share and total of ratio is 1/3]

So B will finish the work in 54 days

Ques. To complete a work A and B takes 8 days, B and C takes 12 days, A,B and C takes 6 days. How much time A and C will take

24 days

16 days

12 days

8 days

Answer: Option D

Explanation:

A+B 1 day work = 1/8

B+C 1 day work = 1/12

A+B+C 1 day work = 1/6

We can get A work by (A+B+C)-(B+C)

And C by (A+B+C)-(A+B)

So A 1 day work =

$1/6-1/12=1/12$

Similarly C 1 day work =

$1/6-1/8=(4-3)/24=1/24$

So A and C 1 day work =

$1/12+1/24=3/24=1/8$

So A and C can together do this work in 8 days

Ques. A can do a piece of work in 15 days and B alone can do it in 10 days. B works at it for 5 days and then leaves. A alone can finish the remaining work in

5 days

6 days

7.5 days

8.5 days

Answer: Option C

Explanation:

B's 5 days work =
1/10∗5=½
Remaining work =1−1/2=½
A can finish work =15∗1/2=7.5days

A completes 80% of a work in 20 days. Then B also joins and A and B together finish the remaining work in 3 days. How long does it need for B if he alone completes the work?
35 ½
36 ½
37 ½
38 ½

Answer: Option C

Explanation:

Work done by A in 20 days = 80/100 = 8/10 = 4/5

Work done by A in 1 day = (4/5) / 20 = 4/100 = 1/25 --- (1)

Work done by A and B in 3 days = 20/100 = 1/5 (Because remaining 20% is done in 3 days by A and B)

Work done by A and B in 1 day = 1/15 ---(2)

Work done by B in 1 day = 1/15 – 1/25 = 2/75

=> B can complete the work in 75/2 days = 37 (1/2) days

Ques. 4 men and 6 women finish a job in 8 days, while 3 men and 7 women finish it in 10 days. In how many days will 10 women working together finish it ?
30 days

40 days
50 days
60 days

Answer: Option B

Explanation:

Let 1 man's 1 day work = x
and 1 woman's 1 days work = y.
Then, 4x + 6y = 1/8
and 3x+7y = 1/10
solving, we get y = 1/400 [means work done by a woman in 1 day]

10 women 1 day work = 10/400 = 1/40

10 women will finish the work in 40 days

Ques, 10 women can complete a work in 7 days and 10 children take 14 days to complete the work. How many days will 5 women and 10 children take to complete the work?
6 days
7 days
8 days
9 days

Answer: Option B

Explanation:

1 woman's 1 day's work = 1/70
1 Child's 1 day's work = 1/140
5 Women and 10 children 1 day work =

(5/70 +10/140)=1/7

So 5 women and 10 children will finish the work in 7 days.

Ques. 5 men and 2 boys working together can do four times as much work as a man and a boy. Working capacity of man and boy is in the ratio

1:2

1:3

2:1

2:3

Answer: Option C

Explanation:

Let 1 man 1 day work = x

1 boy 1 day work = y

then 5x + 2y = 4(x+y)

=> x = 2y

=> x/y = 2/1

=> x:y = 2:1

Rahul and Sham together can complete a task in 35 days, but Rahul alone can complete same work in 60 days. Calculate in how many days Sham can complete this work ?

84 days

82 days

76 days

68 days

Answer: Option A

Explanation:

As Rahul and Sham together can finish work in 35 days.

1 days work of Rahul and Sham is 1/35

Rahul can alone complete this work in 60 days,

So, Rahul one day work is 1/60

Clearly, Sham one day work will be = (Rahul and Sham one day work) - (Rahul one day work)

=1/35−1/60=1/84

Hence Sham will complete the given work in 84 days.

Ques. If 6 men and 8 boys can do a piece of work in 10 days while 26 men and 48 boys can do the same in 2 days, the time taken by 15 men and 20 boys in doing the same type of work will be:

A. 4 days
B. 5 days
C. 6 days
D. 7 days
Answer: Option A

Explanation:

Let 1 man's 1 day's work = x and 1 boy's 1 day's work = y.

Then, 6x + 8y = 1/10 and 26x + 48y = 1/2 .

Solving these two equations, we get : x = 1/100 and y = 1/200 .
(15 men + 20 boy)'s 1 day's work = 15/100 + 20/200 = 1/4 .
15 men and 20 boys can do the work in 4 days.

Ques. A and B can together finish a work 30 days. They worked together for 20 days and then B left. After another 20 days, A finished the remaining work. In how many days A alone can finish the work?

A. 40
B. 50
C. 54
D. 60
Answer: Option D

Explanation:

(A + B)'s 20 day's work = (1/30 x 20) = 2/3 .

Remaining work = (1 - 2/3) = 1/3 .
Now, 1/3 work is done by A in 20 days.

Therefore, the whole work will be done by A in (20 x 3) = 60 days.

Ques. A person incurs a loss of 5% be selling a watch for Rs. 1140. At what price should the watch be sold to earn 5% profit.
Rs.1200
Rs.1230
Rs.1260
Rs.1290

Option C

Explanation:

Let the new S.P. be x, then.
(100 - loss%):(1st S.P.) = (100 + gain%):(2nd S.P.)

=>(95/1140=105/x)=>x=1260

Ques. A book was sold for Rs 27.50 with a profit of 10%. If it were sold for Rs. 25.75, then would have been percentage of profit and loss ?
2% Profit
3% Profit
2% Loss
3% Loss
Answer And Explanation
Answer: Option B

Explanation:

Please remember
S.P.=(((100+gain%)/100)∗C.P)

So, C.P. = ((100/110)∗25.75)
When S.P. = 25.75 then Profit=25.75−25=Re.0.75
Profit%=(0.75/25)∗100=3%

Ques. If the cost price is 25% of selling price. Then what is the profit percent.
150%
200%
300%
350%

Answer: Option C
Explanation:
Let the S.P = 100
then C.P. = 25
Profit = 75
Profit% = 75/25 * 100 = 300%

Ques. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25%, find out the value of x
13
14
15
16

Answer: Option D

Explanation:

Let the Cost Price of one article = Rs. 1
CP of x articles = Rs. x
CP of 20 articles = 20
Selling price of x articles = 20

Profit = 25% [Given]

⇒((SP−CP)/CP) = 25/100=1/4⇒(20−x)/x=¼

⇒80−4x=x
⇒5x=80
⇒x=80/5=16

Ques. A man buys an item at Rs. 1200 and sells it at the loss of 20 percent. Then what is the selling price of that item
Rs. 660
Rs. 760
Rs. 860
Rs. 960
Answer And Explanation
Answer: Option D

Explanation:

Here always remember, when ever x% loss,
it means S.P. = (100 - x)% of C.P
when ever x% profit,
it means S.P. = (100 + x)% of C.P

So here will be (100 - x)% of C.P.
= 80% of 1200
= 80/100 * 1200
= 960

Ques. Sahil purchased a machine at Rs 10000, then got it repaired at Rs 5000, then gave its transportation charges Rs 1000. Then he sold it with 50% of profit. At what price he actually sold it.
Rs. 22000
Rs. 24000
Rs. 26000
Rs. 28000
Answer And Explanation
Answer: Option B

Explanation:

Question seems a bit tricky, but it is very simple.
Just calculate all Cost price, then get 150% of CP.

C.P. = 10000 + 5000 + 1000 = 16000

150% of 16000 = 150/100 * 16000 = 24000

Ques. A plot is sold for Rs. 18,700 with a loss of 15%. At what price it should be sold to get profit of 15%.
Rs 25300
Rs 22300
Rs 24300
Rs 21300
Answer And Explanation
Answer: Option A

Explanation:

This type of question can be easily and quickly solved as following:

Let at Rs x it can earn 15% pr0fit
85:18700 = 115:x [as, loss = 100 -15, Profit = 100 +15]

x = (18700*115)/85
= Rs.25300

Ques. A man gains 20% by selling an article for a certain price. If he sells it at double the price, the percentage of profit will be.
130%
140%
150%
160%
Answer And Explanation
Answer: Option B

Explanation:

Let the C.P. = x,
Then S.P. = (120/100)x = 6x/5
New S.P. = 2(6x/5) = 12x/5

Profit = 12x/5 - x = 7x/5

Profit% = (Profit/C.P.) * 100
=> (7x/5) * (1/x) * 100 = 140 %

Ques. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25% then determine the value of x.
14
15
16
17
Answer And Explanation
Answer: Option C

Explanation:

Let the cost price 1 article = Re 1
Cost price of x articles = x
S.P of x articles = 20

Gain = 20 -x

=>25=(((20−x)/x)∗100)
=>2000−100x=25x
=>x=16

In a certain store, the profit is 320% of the cost. If the cost increases by 25% but the selling price remains constant, approximately what percentage of the selling price is the profit
70%
80%
90%
None of above
Answer And Explanation

Answer: Option A

Explanation:

Let C.P.= Rs. 100.
Then, Profit = Rs. 320,
S.P. = Rs. 420.

New C.P. = 125% of Rs. 100 = Rs. 125
New S.P. = Rs. 420.

Profit = Rs. (420 - 125) = Rs. 295

Required percentage = (295/420) * 100
= 70%(approx)

A man bought an article and sold it at a gain of 5 %. If he had bought it at 5% less and sold it for Re 1 less, he would have made a profit of 10%. The C.P. of the article was
Rs 100
Rs 150
Rs 200
Rs 250
Answer And Explanation
Answer: Option C

Explanation:

Let original Cost price is x
Its Selling price = 105/100 * x = 21x/20
New Cost price = 95/100 * x = 19x/20
New Selling price = 110/100 * 19x/20 = 209x/200
[(21x/20) - (209x/200)] = 1

=> x = 200

A fruit seller sells mangoes at the rate of Rs.9 per kg and thereby loses 20%. At what price per kg, he should have sold them to make a profit of 5%

Rs 8.81
Rs 9.81
Rs 10.81
Rs 11.81
Answer And Explanation
Answer: Option D

Explanation:

85 : 9 = 105 : x
x= (9×105/85)
= Rs 11.81

Ques. A shopkeeper sold an article for Rs 2564.36. Approximately what was his profit percent if the cost price of the article was Rs 2400
4%
5%
6%
7%
Answer And Explanation
Answer: Option D

Explanation:

Gain % = (164.36*100/2400) = 6.84 % = 7% approx

Ques. A sum of money at simple interest amounts to Rs. 2240 in 2 years and to Rs. 2600 in 5 years. What is the principal amount

1000

1500

2000

2500

Answer And Explanation

Answer: Option C

Explanation:

SI for 3 year = 2600-2240 = 360

SI for 2 year 360/3 * 2 = 240

principal = 2240 - 240 = 2000

Qu.In how many years Rs 150 will produce the same interest at 8% as Rs. 800 produce in 3 years at 9/2%

8

9

10

11

Answer And Explanation

Answer: Option B

Explanation:

Clue:

Firstly we need to calculate the SI with prinical 800,Time 3 years and Rate 9/2%, it will be Rs. 108

Then we can get the Time as

Time = (100*108)/(150*8) = 9

Ques. A financier claims to be lending money at simple interest, But he includes the interest every six months for calculating the principal. If he is charging an interest of 10%, the effective rate of interest becomes.

10.25%

10%

9.25%
9%
Answer And Explanation
Answer: Option A

Explanation:

Let the sum is 100.

As financier includes interest every six months., then we will calculate SI for 6 months, then again for six months as below:

SI for first Six Months = (100*10*1)/(100*2) = Rs. 5

Important: now sum will become 100+5 = 105

SI for last Six Months = (105*10*1)/(100*2) = Rs. 5.25

So amount at the end of year will be (100+5+5.25)
= 110.25

Effective rate = 110.25 - 100 = 10.25

Ques. A sum of money amounts to Rs 9800 after 5 years and Rs 12005 after 8 years at the same rate of simple interest. The rate of interest per annum is
9%
10%
11%
12%

Answer: Option D

Explanation:

We can get SI of 3 years = 12005 - 9800 = 2205

SI for 5 years = (2205/3)*5 = 3675 [so that we can get principal amount after deducting SI]

Principal = 12005 - 3675 = 6125

So Rate = (100*3675)/(6125*5) = 12%

Albert invested amount of 8000 in a fixed deposit for 2 years at compound interest rate of 5 % per annum. How much Albert will get on the maturity of the fixed deposit.
Rs. 8510
Rs. 8620
Rs. 8730
Rs. 8820
Answer And Explanation
Answer: Option D

Explanation:

=>(8000×(1+5100)^2)
=>8000×21/20×21/20
=>8820

Ques. A man saves Rs 200 at the end of each year and lends the money at 5% compound interest. How much will it become at the end of 3 years.
Rs 662
Rs 662.01
Rs 662.02
Rs 662.03
Answer And Explanation
Answer: Option C

Explanation:

=[200(21/20×21/20×21/20)+200(21/20×21/20)+200(21/20)]
=662.02

Ques. Find compound interest on Rs. 7500 at 4% per annum for 2 years, compounded annually
Rs 312
Rs 412
Rs 512

Rs 612
Answer And Explanation
Answer: Option D

Explanation:

Please apply the formula

Amount=P(1+R/100)^n
C.I. = Amount - P

The present worth of Rs.169 due in 2 years at 4% per annum compound interest is
Rs 155.25
Rs 156.25
Rs 157.25
Rs 158.25
Answer And Explanation
Answer: Option B

Explanation:

In this type of question we apply formula
Amount=P/(1+R/100)^n
Amount=169(1+4/100)^2
Amount=169∗25∗25/26∗26
Amount=156.25

Ques. At what rate of compound interest per annum will a sum of Rs. 1200 become Rs. 1348.32 in 2 years
3%
4%
5%
6%

Answer And Explanation
Answer: Option D

Explanation:

Let Rate will be R%

1200(1+R/100)^2=134832/100
(1+R/100)^2=134832/120000
(1+R/100)^2=11236/10000
(1+R100)=106100
=>R=6%

Ques. The least number of complete years in which a sum of money put out at 20% compound interest will be more than doubled is
4 years
5 years
6 years
7 years

Answer: Option A

Explanation:

As per question we need something like following

P(1+R/100)^n > 2P
(1+20/100)^n > 2
(6/5)^n > 2
6/5×6/5×6/5×6/5 > 2

So answer is 4 years

In what time will Rs.1000 become Rs.1331 at 10% per annum compounded annually
2 Years
3 Years

4 Years
5 Years
Answer And Explanation
Answer: Option B

Explanation:

Principal = Rs.1000;
Amount = Rs.1331;
Rate = Rs.10%p.a.

Let the time be n years then,

1000(1+10/100)^n=1331
(11/10)^n=1331/1000
(1110)^3=1331/1000

So answer is 3 years

If the simple interest on a sum of money for 2 years at 5% per annum is Rs.50, what will be the compound interest on same values
Rs.51.75
Rs 51.50
Rs 51.25
Rs 51

Answer: Option C

Explanation:

S.I.=P∗R∗T/100
P=(50∗100)/5∗2=500
Amount=500(1+5/100)^2
500(21/20∗21/20)=551.25
C.I.=551.25−500
=51.25

Ques. The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 4% per annum is Rs 1. Find the sum

Rs 600

Rs 625

Rs 650

Rs 675

Answer: Option B

Explanation:

Let the Sum be P

S.I. = P∗4∗2/100=2P/25

C.I. = P(1+4/100)^2−P

=(676P/625)−P

=51P/625

As, C.I. - S.I = 1

=>51P/625−2P/25=1

=>(51P−50P)625=1

P=625

Ques. A sum of money invested at compound interest to Rs. 800 in 3 years and to Rs 840 in 4 years. The rate on interest per annum is.

4%

5%

6%

7%

Answer And Explanation

Answer: Option B

Explanation:

S.I. on Rs 800 for 1 year = 40

Rate = (100*40)/(800*1) = 5%

Ques. A train covers a distance in 50 minutes, if it runs at a speed of 48kmph on an average. Find the speed at which the train must run to reduce the time of journey to 40 minutes.

50 km/hr
60 km/hr
65 km/hr
70 km/hr
Answer And Explanation
Answer: Option B

Explanation:

We are having time and speed given, so first we will calculate the distance. Then we can get new speed for given time and distance.
Lets solve it.

Time = 50/60 hr = 5/6 hr
Speed = 48 mph
Distance = S*T = 48 * 5/6 = 40 km

New time will be 40 minutes so,
Time = 40/60 hr = 2/3 hr
Now we know,
Speed = Distance/Time
New speed = 40*3/2 kmph = 60kmph

Ques. Two boys starting from the same place walk at a rate of 5kmph and 5.5kmph respectively. What time will they take to be 8.5km apart, if they walk in the same direction?
15 hours
16 hours
17 hours
18 hours
Answer And Explanation
Answer: Option C

Explanation:

In this type of questions we need to get the relative speed between them,
The relative speed of the boys = 5.5kmph – 5kmph
= 0.5 kmph

Distance between them is 8.5 km
Time = Distance/Speed
Time= 8.5km / 0.5 kmph = 17 hrs

Ques. Excluding stoppages, the speed of a bus is 54 kmph and including stoppages, it is 45 kmph. For how many minutes does the bus stop per hour ?
8 minutes
10 mintues
12 minutes
14 minutes
Answer And Explanation
Answer: Option B

Explanation:

Due to stoppages, it covers 9 km less.

Time taken to cover 9 km = (9/54) hour
= (1/6)*60 minutes
= 10 minutes

Ques. 2 trains starting at the same time from 2 stations 200 km apart and going in opposite direction cross each other at a distance of 110 km from one of the stations. What is the ratio of their speeds ?
11:9
13:9
17:9
21:9
Answer And Explanation
Answer: Option A

Explanation:

We know total distance is 200 Km
If both trains crossed each other at a distance of 110 km then one train covered 110 km and other 90 km [110+90=200km]

So ratio of their speed = 110:90 = 11:9

Ques. 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?
16 km
14 km
12 km
10 km
Answer And Explanation
Answer: Option A

Explanation:

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

So distance traveled on foot = 4(4) = 16 km

A man on tour travels first 160 km at 64 km/hr and the next 160 km at 80 km/hr. Find the average speed for first 320 km of tour.
70.11 km/hr
71.11 km/hr
72.11 km/hr
73.11 km/hr
Answer And Explanation
Answer: Option B

Explanation:

We know Time = Distance/speed

So total time taken =
(160/64+160/80)=92hours
Time taken for 320 Km
= 320∗2/9
=71.11km/hr
Robert is travelling on his cycle and has calculated to reach point A at 2 P.M. if he travels at 10 kmph, he will reach there at 12 noon if he travels at 15 kmph. At what speed must he travel to reach A at 1 P.M.?
9 km/hour
10 km/hour
11 km/hour
12 km/hour
Answer And Explanation
Answer: Option D

Explanation:

We need to calculate the distance, then we can calculate the time and finally our answer.
Lets solve this,

Let the distance travelled by x km
Time = Distance/Speed

x/10−x/15=2
[because, 2 pm - 12 noon = 2 hours]

3x−2x=60
x=60
Time=Distance/Speed
Time@10km/hr=60/10=6hours

So 2 P.M. - 6 = 8 A.M
Robert starts at 8 A.M.

He have to reach at 1 P.M. i.e, in 5 hours

So, Speed = 60/5 = 12 km/hr

A person travels from P to Q at a speed of 40 km/hr and returns by increasing his speed by 50%. What is his average speed for both the trips ?

44 km/hour

46 km/hour

48 km/hour

50 km/hour

Answer And Explanation

Answer: Option C

Explanation:

Speed while going = 40 km/hr

Speed while returning = 150% of 40 = 60 km/hr

Average speed =

2xy/(x+y)

=2∗40∗60/(40+60)

=4800/100

=48Km/hr

A man in a train notices that he can count 41 telephone posts in one minute. If they are known to be 50 metres apart, then at what speed is the train travelling?

60 km/hr

100 km/hr

110 km/hr

120 km/hr

Answer And Explanation

Answer: Option D

Explanation:

Number of gaps between 41 poles = 40

So total distance between 41 poles = 40*50

= 2000 meter = 2 km
In 1 minute train is moving 2 km/minute.
Speed in hour = 2*60 = 120 km/hour

A person travels equal distances with speed of 3 km/hr, 4 km/hr and 5 km/hr and takes a total of 47 minutes. Find the total distane
3 km
4 km
6 km
9 km
Answer And Explanation
Answer: Option A

Explanation:

Let the distance be 3x km,
then,
x/3+x/4+x/5=47/60
47x/60=47/60
x=1

So total distance = 3*1 = 3 Km

Ques. A walks around a circular field at the rate of one round per hour while B runs around it at the rate of six rounds per hour. They start at same point at 7:30 am. They shall first cross each other at ?
7:15 am
7:30 am
7: 42 am
7:50 am
Answer And Explanation
Answer: Option C

Explanation:

Relative speed between two = 6-1 = 5 round per hour

They will cross when one round will complete with relative speed,
which is 1/5 hour = 12 mins.

So 7:30 + 12 mins = 7:42

The ratio between the speeds of two trains is 7: 8. If the second train runs 400 kms in 4 hours, then the speed of the first train is ?
83.5 km/hr
84.5 km/hr
86.5 km/hr
87.5 km/hr
Answer And Explanation
Answer: Option D

Explanation:

Let the speeds of two trains be 7X and 8X km/hr.

8X=400/4
=>X=12.5Km/hr

So speed of first train is 12.5*7 = 87.5 km/hr

Ques. A man can row upstream 10 kmph and downstream 20 kmph. Find the man rate in still water and rate of the stream.
0,5
5,5
15,5
10,5
Answer And Explanation
Answer: Option C

Explanation:

Please remember,
If a is rate downstream and b is rate upstream

Rate in still water = 1/2(a+b)
Rate of current = 1/2(a-b)

=> Rate in still water = 1/2(20+10) = 15 kmph
=> Rate of current = 1/2(20-10) = 5 kmph

Ques. In one hour, a boat goes 11km along the stream and 5 km against it. Find the speed of the boat in still water
6
7
8
9
Answer And Explanation
Answer: Option C

Explanation:

We know we can calculate it by 1/2(a+b)

=> 1/2(11+5) = 1/2(16) = 8 km/hr

Ques. If Rahul rows 15 km upstream in 3 hours and 21 km downstream in 3 hours, then the speed of the stream is
5 km/hr
4 km/hr
2 km/hr
1 km/hr
Answer And Explanation
Answer: Option D

Explanation:

Rate upstream = (15/3) kmph
Rate downstream (21/3) kmph = 7 kmph.
Speed of stream (1/2)(7 - 5)kmph = 1 kmph

Ques. A man rows 750 m in 675 seconds against the stream and returns in 7 and half minutes. His rowing speed in still water is

4 kmph

5 kmph

6 kmph

7 kmph

Answer And Explanation

Answer: Option B

Explanation:

Rate upstream = (750/675) = 10/9 m/sec

Rate downstream (750/450) m/sec = 5/3 m/sec

Rate in still water = (1/2)*[(10/9) + (5/3)] m/sec.

= 25/18 m/sec

= (25/18)*(18/5) kmph

= 5 kmph

If a boat goes 7 km upstream in 42 minutes and the speed of the stream is 3 kmph, then the speed of the boat in still water is

12 kmph

13 kmph

14 kmph

15 kmph

Answer: Option B

Explanation:

Rate upstream = (7/42)*60 kmh = 10 kmph.

Speed of stream = 3 kmph.

Let speed in sttil water is x km/hr

Then, speed upstream = (x —3) km/hr.

x-3 = 10 or x = 13 kmph

Ques. A man takes twice as long to row a distance against the stream as to row the same distance in favour of the stream. The ratio of the speed of the boat in still water and stream is

3:1

1:3

2:4

4:2

Answer And Explanation

Answer: Option A

Explanation:

Let speed downstream = x kmph
Then Speed upstream = 2x kmph

So ratio will be,
(2x+x)/2 : (2x-x)/2
=> 3x/2 : x/2 => 3:1

A man's speed with the current is 20 kmph and speed of the current is 3 kmph. The Man's speed against the current will be

11 kmph

12 kmph

14 kmph

17 kmph

Answer And Explanation

Answer: Option C

Explanation:

If you solved this question yourself, then trust me you have a all very clear with the basics of this chapter.

If not then lets solve this together.
Speed with current is 20,
speed of the man + It is speed of the current
Speed in still water = 20 - 3 = 17

Now speed against the current will be
speed of the man - speed of the current
= 17 - 3 = 14 kmph

Ques. A man can row at 5 kmph in still water. If the velocity of the current is 1 kmph and it takes him 1 hour to row to a place and come back. how far is that place.
.4 km
1.4 km
2.4 km
3.4 km
Answer And Explanation
Answer: Option C

Explanation:

Let the distance is x km
Rate downstream = 5 + 1 = 6 kmph
Rate upstream = 5 - 1 = 4 kmph
then
x/6 + x/4 = 1 [because distance/speed = time]
=> 2x + 3x = 12
=> x = 12/5 = 2.4 km

Ques. The speed of a boat in still water is 15 km/hr and the rate of current is 3 km/hr. The distance travelled downstream in 12 minutes is
1.6 km
2 km
3.6 km
4 km
Answer And Explanation
Answer: Option C

Explanation:

Speed downstreams =(15 + 3)kmph
= 18 kmph.
Distance travelled = (18 x 12/60)km

= 3.6km

Ques.Sahil can row 3 km against the stream in 20 minutes and he can return in 18 minutes. What is rate of current ?

1/2 km/hr

1/3 km/hr

2 km/hr

4 km/hr

Answer And Explanation

Answer: Option A

Explanation:

Speed Upstream=
3/(20/60)=9km/hrSpeed
Downstream=3(18/60)=10km/hr
Rate of current will be (10−9)/2
=1/2km/hr

Ques. In how many words can be formed by using all letters of the word BHOPAL

420

520

620

720

Answer And Explanation

Answer: Option D

Explanation:

Required number
=6!=6∗5∗4∗3∗2∗1=720

Ques. In how many way the letter of the word "APPLE" can be arranged

20

40

60

80
Answer And Explanation
Answer: Option C

Explanation:

Friends the main point to note in this question is letter "P" is written twice in the word.
Easy way to solve this type of permutation question is as,

So word APPLE contains 1A, 2P, 1L and 1E
Required number =
=5!/(1!∗2!∗1!∗1!)
=(5∗4∗3∗2!)2!
=60

In how many way the letter of the word "RUMOUR" can be arranged
2520
480
360
180
Answer And Explanation
Answer: Option D

Explanation:

In above word, there are 2 "R" and 2 "U"
So Required number will be

=6!/(2!∗2!)
=6∗5∗4∗3∗2∗1/4
=180

In how many ways can the letters of the word "CORPORATION" be arranged so that vowels always come together.
5760
50400
2880

None of above
Answer And Explanation
Answer: Option B

Explanation:

Vowels in the word "CORPORATION" are O,O,A,I,O
Lets make it as CRPRTN(OOAIO)

This has 7 lettes, where R is twice so value = 7!/2!
= 2520

Vowel O is 3 times, so vowels can be arranged = 5!/3!

= 20

Total number of words = 2520 * 20 = 50400

In a group of 6 boys and 4 girls, four children are to be selected. In how many different ways can they be selected such that at least one boy should be there
109
128
138
209
Answer And Explanation
Answer: Option D

Explanation:

In a group of 6 boys and 4 girls, four children are to be selected such that
at least one boy should be there.
So we can have

(four boys) or (three boys and one girl) or (two boys and two girls) or (one boy and three gils)

This combination question can be solved as

$$
\begin{aligned}
&({}^6C_4) + ({}^6C_3 *^4 C_1) + \\
&+({}^6C_2 *^4 C_2) + ({}^6C_1 *^4 C_3) \\
&= \left[\frac{6\times5}{2\times1}\right] + \left[\left(\frac{6\times5\times4}{3\times2\times1}\right)\times4\right] + \\
&\left[\left(\frac{6\times5}{2\times1}\right)\left(\frac{4\times3}{2\times1}\right)\right] + [6\times4] \\
&= 15 + 80 + 90 + 24 \\
&= 209
\end{aligned}
$$

From a group of 7 men and 6 women, five persons are to be selected to form a committee so that at least 3 men are there on the committee. In how many ways can it be done

456

556

656

756

Answer And Explanation

Answer: Option D

Explanation:

From a group of 7 men and 6 women, five persons are to be selected with at least 3 men.
So we can have
(5 men) or (4 men and 1 woman) or (3 men and 2 woman)

$$
\begin{aligned}
&({}^5C_5) + ({}^5C_4 * {}^6C_1) + \\
&\quad + ({}^5C_3 * {}^6C_2) \\
&= \left[\frac{7\times 6}{2\times 1}\right] + \left[\left(\frac{7\times 6\times 5}{3\times 2\times 1}\right)\times 6\right] + \\
&\quad \left[\left(\frac{7\times 6\times 5}{3\times 2\times 1}\right)\times\left(\frac{6\times 5}{2\times 1}\right)\right] \\
&= 21 + 210 + 525 = 756
\end{aligned}
$$

A bag contains 2 white balls, 3 black balls and 4 red balls. In how many ways can 3 balls be drawn from the bag, if at least one black ball is to be included in the draw

64

128

132

222

Answer And Explanation

Answer: Option A

Explanation:

From 2 white balls, 3 black balls and 4 red balls, 3 balls are to be selected such that at least one black ball should be there.

Hence we have 3 choices

All three are black

Two are black and one is non black

One is black and two are non black

Total number of ways

= 3C3 + (3C2 x 6C1) + (3C1 x 6C2) [because 6 are non black]

=1+[3×6]+[3×((6×5)/(2×1))]=1+18+45=64

Ques. A box contains 4 red, 3 white and 2 blue balls. Three balls are drawn at random. Find out the number of ways of selecting the balls of different colours

12

24

48

168

Answer And Explanation

Answer: Option B

Explanation:

This question seems to be a bit typical, isn't, but it is simplest.
1 red ball can be selected in 4C1 ways
1 white ball can be selected in 3C1 ways
1 blue ball can be selected in 2C1 ways

Total number of ways
= 4C1 x 3C1 x 2C1
= 4 x 3 x 2
= 24

Please note that we have multiplied the combination results, we use to add when their is OR condition, and we use to multiply when there is AND condition, In this question it is AND as 1 red AND 1 White AND 1 Blue, so we multiplied.

Three unbiased coins are tossed, what is the probability of getting at least 2 tails ?

1/3

1/6

1/2

1/8

Answer And Explanation

Answer: Option C

Explanation:

Total cases are = 2*2*2 = 8, which are as follows

[TTT, HHH, TTH, THT, HTT, THH, HTH, HHT]

Favoured cases are = [TTH, THT, HTT, TTT] = 4

So required probability = 4/8 = ½

Ques. In a throw of dice what is the probability of getting number greater than 5
1/2
1/3
1/5
1/6
Answer And Explanation
Answer: Option D

Explanation:

Number greater than 5 is 6, so only 1 number
Total cases of dice = [1,2,3,4,5,6]

So probability = ⅙

Ques. Two dice are thrown simultaneously. What is the probability of getting two numbers whose product is even ?
3/4
1/4
7/4
1/2
Answer And Explanation
Answer: Option A

Explanation:

Total number of cases = 6*6 = 36

Favourable cases = [(1,2),(1,4),(1,6),(2,1),(2,2),(2,3),(2,4),(2,5),(2,6),(3,2),(3,4),(3,6),(4,1),(4,2),(4,3),(4,4),(4,5),(4,6),(5,2),(5,4),(5,6),(6,1),(6,2),(6,3),(6,4),(6,5),(6,6)] = 27

So Probability = 27/36 = ¾

Ques. In a box, there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither blue nor green?
2/3
8/21
3/7
9/22

Answer: Option B

Explanation:

Total number of balls = (8 + 7 + 6) = 21
Let E = event that the ball drawn is neither blue nor green =e vent that the ball drawn is red.
Therefore, n(E) = 8.
P(E) = 8/21.

Ques. A card is drawn from a pack of 52 cards. The probability of getting a queen of club or a king of heart is
1/13
2/13
1/26
1/52
Answer And Explanation
Answer: Option C

Explanation:

Total number of cases = 52
Favourable cases = 2

Probability = 2/56 = 1/26

Ques. A speaks truth in 75% of cases and B in 80% of cases. In what percentage of cases are they likely to contradict each other, narrating the same incident

30%
35%
40%
45%
Answer And Explanation
Answer: Option B

Explanation:

Let A = Event that A speaks the truth
B = Event that B speaks the truth

Then P(A) = 75/100 = 3/4
P(B) = 80/100 = 4/5

P(A-lie) = 1-3/4 = 1/4
P(B-lie) = 1-4/5 = 1/5

Now
A and B contradict each other =
[A lies and B true] or [B true and B lies]
= P(A).P(B-lie) + P(A-lie).P(B)
[Please note that we are adding at the place of OR]
= (3/5*1/5) + (1/4*4/5) = 7/20
= (7/20 * 100) % = 35%

Ques. From a pack of 52 cards, two cards are drawn together, what is the probability that both the cards are kings
2/121
2/221
1/221
1/13
Answer And Explanation
Answer: Option C

Explanation:

Total cases =52C2=52∗51/2∗1=1326

Total King cases =4C2=4∗3/2∗1=6

Probability ==6/1326=1/221

Ques. A box contains 5 green, 4 yellow and 3 white balls. Three balls are drawn at random. What is the probability that they are not of same colour.

52/55

3/55

41/44

3/44

$$\text{Total cases} = {}^{12}C_3$$

$$= \frac{12 * 11 * 10}{3 * 2 * 1} = 220$$

$$\text{Total cases of drawing same colour} = {}^{5}C_3 + {}^{4}C_3 + {}^{3}C_3$$

$$\frac{5 * 4}{2 * 1} + 4 + 1 = 15$$

$$\text{Probability of same colur} = = \frac{15}{220}$$

$$= \frac{3}{44}$$

$$\text{Probability of not same colur} = 1 - \frac{3}{44}$$

$$= \frac{41}{44}$$

Ques. Bag contain 10 back and 20 white balls, One ball is drawn at random. What is the probability that ball is white

1

2/3

1/3

4/3

Answer And Explanation

Answer: Option B

Explanation:

Total cases = 10 + 20 = 30

Favourable cases = 20

So probability = 20/30 = ⅔

There is a pack of 52 cards and Rohan draws two cards together, what is the probability that one is spade and one is heart ?

11/102

13/102

11/104

11/102

Answer And Explanation

Answer: Option B

Explanation:

Two cards are drawn together from a pack of 52 cards. The probability that one is a spade and one is a heart, is:

Let sample space be S

then, $n(S) = {}^{52}C_2$

$$\Rightarrow \frac{52 \times 51}{2 \times 1} = 1326$$

let E be event of getting 1 spade and 1 heart

So, n(E) = ways of getting 1 spade or 1 heart out of 13

$$= {}^{13}C_1 \times {}^{13}C_1$$

$$= 13 \times 13$$

$$= 169$$

$$\text{So, } p(E) = \frac{n(E)}{n(S)}$$

$$= \frac{169}{1326} = \frac{13}{102}$$

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High Importance QUESTIONS

1. The cost price of 10 articles is equal to the selling price of 9 articles. find the profit percent.
a. 101/9 % b. 100/9 % c. 102/9 % d. 103/9 %

Ans: 100/9 %

Let Cost Price be x and selling price be y
Then given that cost price of 10 articles is equal to the selling price of 9 articles
That means 10x=9y
Y= 10x/9
Profit percent = ((selling price – cost price)/cost price) * 100
= 100/9 %

2. The ratio of radii of two right circular cylinders is 6:7 and their heights are in the ratio 5:9. The ratio of their respective curved surface areas is
a. 14:15 b. 17:19 c. 23:29 d. 10:21

Ans: 10 : 21

Curved surface area of a cylinder = 2 * Pi * r * h
Ratio = (6/7) * (5/9) = 10:21

3. In how many ways can the 7 letters A,B,C,D,E,F and G be arranged so that C and E never together.
a. 5040 b. 6480 c. 3600 d. 1440

Ans: 3600

C and E never together = Total arrangements – C and E together
Total arrangements are 7!
C and E together = pack c and e into one unit + 5 other alphabets = 6! 2! (2! Is two arrange c and e internally)
C and E never together = Total arrangements – C and E together = 7! – 6! 2! = 3600

4. How many numbers are there in all from 4000 to 4999 (both 4000 and 4999 included) having at least one of their digits repeated?
a. 356 b. 216 c. 496 d. 504

Ans: 496

Atleast one of their digits repeated = Total numbers – None of the digits repeated
Total numbers from 4000 to 4999 = 1000
None of the digits repeated = _ _ _ _
There are total 4 places
1st place is filled with 4 only. So only one choice
2nd place is filled with any 9 digits except 4 as we have used 4 in 1st place. So 9 choices
Similarly 3rd place is filled with any 8 digits. So we have 8 choices
4th place is filled with any 7 digits. So we have 7 choices.
So total arrangements = 1 * 9 * 8 * 7 = 504
Ans= 1000 – 504 = 496

5. if 1/2x +1/4x+1/8x=14 Then the value of x is:
a. 8 b. 12 c. 4 d. 16

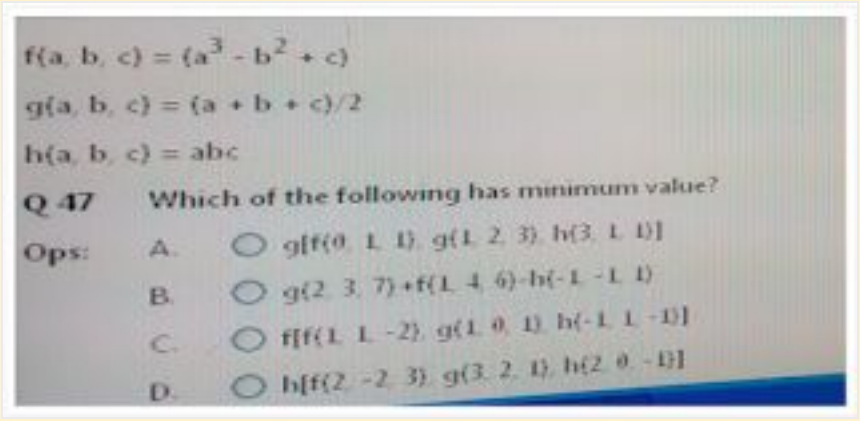
Ans: x = 16

6. Which of the following expressions will always be true?

A. $x^{2/3} = \sqrt{x^3}$ B $x^{2/3} > \sqrt[x]{x^2}$ C $x^{2/3} < \sqrt[x]{x^2}$ D $x^{2/3} = \sqrt[3]{x^2}$

Ans: D

Verify from options



Ans(C)

8. Find the value of h[f(1,2,3), g(2,1,-2), h(1,-1,-1)].
a. 0.5 b. none c. 1 d. 0

Ans(D)

9. A trapezium with an area of 5100 cm2 has the perpendicular distance between the two parallel sides of 60m . if one of the parallel sides be 40m. find the length of the other side.
a. 130 m b. 110 m c. 120 m d. 145 m

Ans: 130 m

Area of a trapezium = (1/2) (a+b) h

10. Find the simple interest on Rs. 306.25 from March 3rd to July 27th(In the same year) at 3.75 percent.
a. Rs. 4.57 b. Rs. 4.59 c. Rs. 4.53 d. Rs 4.58

Ans: 4.59

from March 3rd to July 27th(In the same year) = 146 days
(306.25 * 146 * 3.75)/ (365 * 100) = 4.59

11. Dhruv and Naksh drive at the speeds of 36 Kmph and 54 kmph respectively. If Naksh takes 3 hours lesser than what Dhruv takes for the same distance. Then distance is :
a. 324 km b. 524 km c. 320 km d. 420 km

Ans: 324 km

Let dhruv takes t hours then naksh takes t-3 hours
Because distance is same in both cases
So 36 * t = 54 (t-3)
t=9
ans: 36 * 9 = 324 km

12. The radius of wheel of axis's car is 50 cm. What is the distance that the car would cover in 14 revolutions?
a. 11 m b. 22 m c. 33 m d. 44 m

Ans: 44 m

Distance covered in one revolution is equal to wheel surface area = 2 * Pi * r
Distance covered in 14 revolutions = 14 (2 * (22/7) * 50) = 44000 cm= 44 m

13. P can do a piece of work in 5 days of 8 hours each and Q can do in 4 days of 6 hours each. How long will they take do it working 5 hours a day?
a. 2 days b. 3 days c. 4 days d. 5 days

Ans: 3 days

P can do in 5* 8 hours= 40 hours
Q can do in = 24 hours
Working together in one hour = (1/40) + (1/24) = 1/15
Total work can be finished in 15 hours
They 5 hours a day so total number of days = 15/5 = 3 days

14. Libra had three diamond weighing equal. One of the diamond fell and broke into 4 equal pieces weighing 20gm each. what was the total weight of three diamonds.
a. 200 gm b. 280 gm c. 320 gm d. 240 gm

Ans: 20 * 4 * 3 = 240 gm

16. if the antecedent and consequent of a ratio are increased by 5 and 6 respectively then the ratio is 5:6. find the original ratio. a. 5:6 b. 1:2 c. 2:3 d. 3:4
Ans: let's say original ratio is x:y
(x+5)/(y+6) = 5/6
Then x/y = 5/6

17. Rohit and Rahul start from the same point and move away from each other at right angle. After 4 hours they are 80 km apart. if the speed of Rohit is 4 kmph more than Rahul. what is the speed of Rohit?
a. 16 kmph b. 20 kmph c. 12 kmph d. none

Ans: x is the speed of rahul then (x+4) will be rohit speed

802 = (4x)2 + ((x+4)4)2
X=12
Rohit speed = 12 + 4 = 16kmph

18. Abhimanyu and supreet can together finish a work in 50 days. They worked together for 35 days and then supreet left. After another 21 days, Abhimanyu finished the remaining work. In how many days Abhimanyu alone can finish the work?
a. 70 days b. 75 days c. 80 days d. 60 days

Ans: 35 days worked together + 21 days abhimayu worked = finished the work

35(1/50) + 21(x) = 1
X=70 days
19. if two fair dice are thrown simultaneously. then what is the probability that sum of the numbers appearing on the top faces of the dice is less than 4? a. 6/14 b. none c. 1/12 d. 3/18
Ans: possible cases are (1,1) (1,2) and (2,1) = 3

3/36 = 1/12

20.

21. 3 individuals john wright, greg chappell and gary kristen are in the race for the appointment of new coach of team india. The probabilities of their appointment are 0.5, 0.3 and 0.2 respectively. If john wright is appointed then probability of ganguly appointed as a captain will be 0.7 and corresponding probability if greg chappell or gary kristen is appointed are 0.6 and 0.5 respectively. find the overall probability that ganguly will appointed as a captain.
a. 0.63 b. 0.35 c. 0.18 d. 0.89
Ans: 0.63

22. A man spends Rs 660 on tables and chairs. the price of each table is Rs. 150 and the price of each chair is Rs. 20. If he buys maximum number of tables, what is the ratio of chairs to tables purchased?
a. 2: 5 b. 3:5 c. 2:3 d. 3:4
4 tables + 3 chairs =660
Chairs to tables ratio is 3:4

23. two packets are available for sale.
packet a: peanuts 100 gms for Rs 48 only
packet b: peanuts 150 gms for Rs 72 only
which is a better buy?
a. both have the same value b. packet b c. data insufficient d. packet a
Ans: a. both have the same value

Packet-a : 1 gm cost = 48/100
Packet-b : 1 gm cost = 72/150

24.find the surface area of a piece of metal which is in the form of a parallelogram whose base is 10 cm and height is 6.4 cm
a. 64 cm2 b. 65 cm2 c. 45 cm2 d. 56 cm2
Ans:

25. Sridevi is younger than Rajeev by 4 years. if their ages are in the ratio of 7:9. how old is Sridevi?
Ans: if Sridevi is x then Rajeev will be (x+4)
x/(x+4) = 7/9
x=14

26. A sum of Rs. 900 amounts to Rs. 950 in 3 years at simple interest. If the interest rate is increased by 4%, it would amount to how much?

27. two trains for Palwal leave Kanpur at 10a.m and 10:30 am and travel at the speeds of 60 kmph and 75 kmph respectively. After how many kilometres from Kanpur will the two trains be together?
Ans: 150 km

28. (x + 1/x) = 6 the value of (x5 + 1/x5) = ?
Ans: 6726

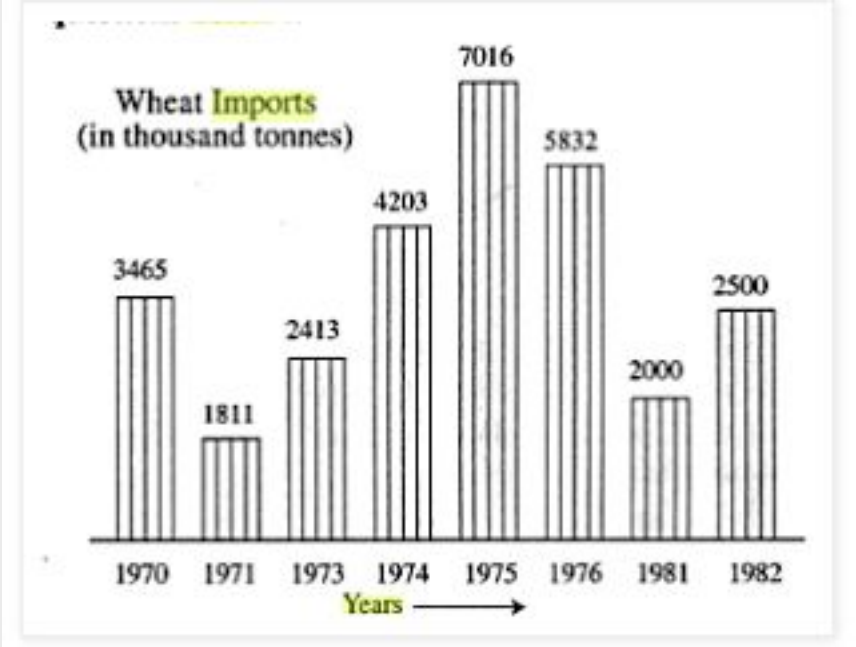
29. In how many ways can 44 people be divided into 22 couples?
Ans: Short cut how many ways n people be divided into n/2 couples
(n!)/{(2!)n/2 (n/2)!} so ans is b. (44!)/{(2!)22 (22!)}

30. Find the remainder when (x3 + 4 x2 + 6 x - 2) is divided (x+5)
Ans: -57

31. a solid cylinder has total surface area of 462 cm2 . If total surface area of the cylinder is thrice of its curved surface area. then the volume of the cylinder is:
a. 539 cm3 b. 545 cm3 c. 531 cm3 d. 562 cm3

Ans:539

32.



In which year was there lowest wheat import?
a. 1973 b. 1974 c. 1975 d. 1982
Ans: a

33. What is the ratio of number of years which have imports above the average imports to those which have imports below the average imports?
a. 5:3 b. 2: 6 c. 3: 8 d. none
Ans: d

34. The increase in imports in 1982 was what percent of the imports in 1981?
a. 25% b. 5% c. 125% d. 80%
Ans: a

35. The section of a solid right circular cone by a plane containing vertex and perpendicular to base is an equilateral triangle of side 10 cm. find the volume of the cone?
a. 221.73 cm3 b.223.73 cm3 c.228.73 cm3 d.226.61 cm3

36. A sum of Rs 468.75 was lent out at simple interest and at the end of 1 year and 8 months, the total amount of Rs 500 is recieved. find the rate of interest.
a. 2% b. 4% c. 1% d. 3%
Ans: 4%

37.Consider the following two curves in the X-Y plane
y=(x3+x2+5)
y=(x2+x+5)
Which of the following statements is true for -2<= x <=2?
a. The two curves do not intersect. b. The two curves intersect thrice.

c. The two curves intersect twice. d. The two curves intersect once.
Ans: b

38.Give a model for maximising the profit in a company or minimising the loss in a conflict with optimisation techniques.where quantity f(x) is referred to as the object function while the vector 'x'consists of decision variables.
A. None of the mentioned options. B. x* =arg min f(x) C. x* =arg max f(x) D. x* =an-1+an arg min f(x)n

39. A positive integer is selected at random and is divided by 7,what is the probability that the remainder is 1?
A. 3/7 B. 4/7 C. 1/7 D. 2/7
Ans: 1/7

40. A mixture of 40 litres of salt and water contains 70%of salt.how much water must be added to decrease the salt percentage to 40%?
A. 40 litres B. 30 litres C. 20 litres D.2 litres
Ans: x=30

41. Anirudh,Harish and Sahil invested a total of Rs.1,35,000 in the ratio 5:6:4 Anirudh invested has capital for 8 months. Harish invested for 6 months and Sahil invested for 4 months. If they earn a profit of Rs.75,900,then what is the share of Sahil in the profit?
A. Rs.12,400 B. Rs.14,700 C. Rs.15,800 D. Rs.13,200
Ans: 13,200

42. A man sets out to cycle from Delhi to Rohtak and at the same time another man starts from Rohtak to cycle to cycle to Delhi. After passing each other they completed their journey in (10/3) hours and (16/3) hours respectively.At what rate does the second man cycle if the first cycle at 8 kmph?
A.6.12 kmph B.6.42 kmph C. 6.22 kmph D. 6.32 kmph
Ans: 6.32

43.Two trains are travelling in opposite directions at uniforms speeds of 60 kmph and 50 kmph.They take 5 seconds to cross each other.If the two trains travelled in the same directions.then a passenger sitting in the faster moving train would have overtaken the other than in 18 seconds.what are the lengths of the trains?
A. 87.78 m and 55 m B.112 m and 78 m C.102.78 m and 50 m D.102.78 m and 55 m
Ans: C

44. A cube is given with an edge of 12 units.it is painted on all faces and then cut into smaller cubes of edge of 4 units. How many cubes will have 2 faces painted? A. 2 B. 12 C. 8 D. 0

45.Two numbers are in the ratio xy,when 2 is added to both the numbers.the ratio becomes 1:2.when 3 is subtracted from both the numbers. The ratio becomes 1:3.Find the sum of x and y. A. 27 B. 24 C. 28 D. 26
Ans: 26

46. To earn extra profit,a shopkeeper mixes 30 kg of dal purchased at Rs.36/kg and 26 kg of dal purchased at Rs.20/kg.What will be the profit that he will make if he sells the mixture at Rs.30/kg?
A. Rs.60 B. Rs.80 C. Rs.50 D. Rs.100
Ans: 80

47. There are 4 boys and 3 girls.they sit in arrow randomly.what is the probability that all girls are together?
A. 1/14 B. 2/14 C. 5/14 D. 3/14
Ans: 2/14

48. An oblong piece of ground measures 19m 2.5 dm by 12m5dm.Fom centre of each side of the ground,a path 2 m wide goes across to the center of the opposite side.What is the area of the path?
A. 59.5 m2 B. 54 m2 C. 43 m2 D. 34 m2
Ans: 78.54

49. The circumference of the wheel of a truck is 1 meter.To cover a distance of 1.5 km.the number of revolutions made by the wheel are: A. 3000 B. 37 C. 1500 D. 750
Ans: 1500 revolutions

50. If (x+(1/x))=4,the value of (x5+(1/x5)) is: A. 724 B. 500 C. 752 D. 525
Ans: 724
Read the information given below in the table and answer the question that follow.

Read the information given below in the tabke and answer the question that follow.

Year	Gross turnover in lakh	Profit before int. and depr.	Interest in lakh	Depreciation in lakh	Net profit Lakh
1980-81	1380	380.92	300.25	69.90	10.67
1981-82	1401	404.98	315.40	71.12	18.46
1982-83	1540	520.03	390.85	80.12	49.16
1983-84	2112	599.01	444.44	88.88	65.59
1984-85	2520	811	505.42	91.91	212.78
1985-86	2750.99	920	600.20	99	220.80

Read the information given below in the tabke and answer the question that follow.

Year	Gross turnover in lakh	Profit before int. and depr.	Interest in lakh	Depreciation in lakh	Net profit Lakh
1980-81	1380	380.92	300.25	69.90	10.67
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1983-84	2112	599.01	444.44	88.88	65.59
1984-85	2520	811	505.42	91.91	212.78
1985-86	2750.99	920	600.20	99	220.80

51.During which year did the net profit exceed Rs.1 crore for the first time?
A.1985-86 B. 1983-84 C. 1984-85 D. None of the mentioned options
Ans: C

52.During which year was the “gross turnover” closest to thrice the profit before interest and depression?
A. 1985-86 B. 1983-84 C. 1984-85 D. None of the mentioned options.
Ans: A

53. During which of the given years did the net profit from the highest proportion of the profit before interest and depression? A. 1985-86 B. 1983-84 C. 1984-85 D. None of the mentioned options.
Ans: C

54. A sum was put at simple interest at certain rate for 3 years. Had it been put at 1% higher rate it would have fetched Rs. 63 more. The sum is: A. Rs. 2,400 B. Rs. 2,100 C. Rs. 2,200 D.Rs. 2,480
Ans: 2,100

55.For what value of “k” will the equation (2kx2 + 5kx +2)=0 have equal roots?
A. 2/7 B. 9/4 C. 16/25 D. 7/18
Ans: C

56.In triangle PQR, PQ=6 cm,PR=8 cm and QR=12 cm. Calculate the area of the triangle PQR.
A. 23.33 cm2 B. 17.5 cm2 C. 21.33 cm2 D. 28.67 cm2
ANs: 21.33

57. A company named “Dyona Automobiles”has received an order for 5,000 widgets for a total sale price of $5,000 and wants to determine the gross profit that will be generated by completing the order. The other details for producing 100,000 widgets are given as follows:
1.Raw Materials Costs-$10,000
2.Direct Labor Costs-$50,000
A. $5,000 B. $4,000 C. $3,000 D. $2,000

58. If m=(2-√3),then the value of (m6+m4+m2+1) /m3 is:
A. 64 B. 56 C. 69 D. 52

59. 28 children can do a piece of work in 50 days.how many children are needed to complete the work in 30 days?
A. 49 B. 40 C. 35 D. 45
Ans: 49

60. A certain sum of money becomes Rs.750 in 2 years and becomes Rs.873 in 3.5 years.Find the sum and rate of interest. A. Rs.400, 13% p.a B. Rs.500,11%p.a C. Rs.630,12%p.a D. Rs.600,13%p.a

Ans: 586, 14%

61. Henna invested Rs.5000 at 12% simple interest p.a.the interest she will receive after 2 years is:
A. Rs.800 B. Rs.1000 C. Rs.600 D. Rs.1200
Ans: (5000*12*12)/100= 1200

62.A bag contains 3 red,5yellow and 4 green balls.3 balls are drawn randomly,what is the probability that the ball drawn contains no yellow ball? A. 9/44 B. 37/44 C. 43/44 D. 7/44
Ans:
Probability = 35/12C3 =7/44

63. If a2+b2-4(a+b)= -8,then the value of (a-b) is:
A. 4 B. 0 C. 2 D. 8

64. A lent Rs.600 to b for 2 years and Rs.150 to C for 4 years and receive all together Rs.90 as both as interest.Find the rate of interest.
A. 4%p.a B. 2%p.a C. 5%p.a D. 3%p.a
Ans: 5%

65. If the perimeter and the diagonal of a rectangle is 18 cm and $\sqrt{41}$ cm respectively.Calculate the area of the rectangular field.
A. 25 cm2 B. 29 cm2 C. 18 cm2 D. 20 cm2
Ans:
2(a+b) = 18
(a+b)=9
$\sqrt{}$ (a2 + b2) = $\sqrt{41}$
(a+b)2 = a2+b2 + 2ab
ab=20

66. A,B, and C enter into a partnership and their shares are in the ratio 1/2 : 1/3 : 1/4.After 2 months,A withdraws half of his capital and after 10 months,a profit of RS. 378 is divied among them. What is B's share?
A. Rs.144 B. Rs.156 C. Rs.166 D. Rs.129

67. If a:b =4:1,then $\sqrt{}$(a/b)+ $\sqrt{}$(b/a) is :
A. 1 B. 4/5 C. None of the mentioned options D. 5/4
Ans: 5/2
68. A cube is given with an edge of 12 units.It is painted on all faces and then cut into smaller cubes of edge of 4 units.How many cubes will have 2 faces painted?
A. 8 B. 12 C. 0 D. 2

69.Find the area of Rhombus one of whose diagonals measures 8 cm and the other 10 cm.
A. 47 cm2 B. 34cm2 C. 40 cm2 D. 64cm2

70. Rs 5000 was divided among 5 men, 6 women and 5 boys, such that the ratio of the shares of men, women and boys is 5:3:2 what is the share of the boy?
a. 200 b. 100 c. 250 d. 150
Ans: 200
The ratio of shares of groups of men, women and boys = 5 :3 :2
So share of boys is = (2/10)*5000 = 1000
Share of a boy= 1000/5 = 200

(d)
5. There are 32 black and 32 white square on a chess-board then number of ways in choosing one white and one black square on the chess.
32C1 x 32C1= 32 x 32=1024
Number of ways in which square lies in the same row
White square=4
Black square=4
Number of rows=8
4C1 x 4C1 x 8 = 128
»Number of ways in which square lies in the same column= 128
Total number in which square lie on the same row or same column= 128 + 128=256.
(d)
6. Ist place of the four letter password can be filled in 11 ways.
IInd place of four letter password can be filled in 10 ways.
IIIrd place of four letter password can be filled in 9 ways.
IVth place of four letter password can be filled in 8 ways.
Hence, required number of ways= 11 x 10 x 9 x 8=7920 ways

(a)
7. Three letter password from 26 letters can be selected in 26 x 25 x 24 ways. Three letter password from 15 asymmetric letters can be selected in 15 x 14 x 13 ways.
Hence, three letter password with at least one symmetric letter can be made in (26 x 25 x 24)-(15 x 14 x 13)=12870 ways.
(c)
8. At lease one candidate out of (2n + 1) candidates can be selected in (2n+1 - 1) ways.
» 22n+1 - 1 = 63 » 22n+1 = 64 = (2)6» n=2.5
Since n cannot be a fraction. Hence n=3.
(a)
9. Required number of triangles formed
10C2 x 11 + 11C2 x 10= 45 x 11 + 55 x 10 = 1045
(c)
10. The digit in the unit's place should be greater than that in the ten's place. Hence, if digit 5 occupies the unit place then remaining four digits need not to follow any order.
Hence required number of ways = 4!
However, if digit 4 occupies the unit place then 5 cannot occupies the ten's positions. Hence, digits at the ten's place will be one among 1, 2 or 3. This can happen in 3 ways. The remaining 3 digits can be filled in the remaining three places in 3! ways. Hence in all we have (3 x 3!) numbers ending in 4.
Similarly, if we have 3 in the unit's place, the ten's place can be either 1 or 2. This can happen in 2 ways. The remaining 3 digits can be arranged in the remaining 3 places in 3! ways. Hence we will have (2 x 3!) numbers ending in 3. Similarly, we can find that there will be 3! numbers ending in 2 and no number ending with 1. Hence total number of numbers
= 4! + (3) x 3! + (2)3! + 3!
= 4! + 6 x 3! = 24 + (6 x 6) = 60
(b)

Elitmus Previous Years Questions On Number System
SET 1
Number System 02

01. If n is any odd number greater than 1, then n(n2 - 1) is always divisible by ?
(a) 96 (b) 48 (c) 24 (d) None of these
02. If a number 774958A96B is to be divisible by 8 and 9, the respective values of A and B will be
(a) 7 and 8 (b) 8 and 0 (c) 5 and 8 (d) None of these
03. Three consecutive positive even numbers are such that thrice the first number exceeds double the third by 2, the third number is ?
(a) 10 (b) 14 (c) 16 (d) 12
04. Three bells chime at intervals of 18 min, 24 min and 32 min respectively. At a certain time, they begin to together, What length of time will elapse before they chime together again ?
(a) 2 h and 24 min (b) 4h and 48 min (c) 1 h and 36 min (d) 5h

05. Two positive integers differ by 4 and sum of their reciprocals is 10/21. Then, one of the numbers is ?
(a) 3 (b) 1 (c) 5 (d) 21
06. (56-1) is divisible by ?
(a) 13 (b) 31 (c) 5 (d) None of these
07. The remainder obtained when a prime number greater that 6 is divided by 6 is
(a) 1 or 3 (b) 1 or 5 (c) 3 or 5 (d) 4 or 5
08. For the product n(n+1)(2n+1) , which one of the following is not necessarily true ?
(a) It is even (b) Divisible by 3 (c) divisible by (n(n+1)(2n+1))/2 (d) Never divisible by 237
09. 72 Hens Rs ...96.7.. Then what does each hen cost, where two digits in place of ".... , ..."are not visible written in illegible hand-writing ?
(a) Rs 3.23 (b) Rs 5.11 (c) Rs 5.51 (d) Rs 7.22
10. Which is the least number that must be subtracted from 1856 so that the remainder when divided by 7, 12, 16, is 4?
(a) 137(b) 1361 (c) 140(d) 172
Answers : Find Detailed Solutions at the end of the the page.

1.	C	2.	B
3.	B	4.	B
5.	A	6.	B
7.	B	8.	D
9.	C	10.	D

SET 2

Number System 01

01. The number of common terms in the two sequences 17, 21, 25, ... , 417 and 16, 21, 26, ...,466 is ?
(a) 19 (b) 20 (c) 77 (d) 22
02. How many integers, greater than 999 but not greater than 4000, can be formed with the digits 0, 1, 2, 3 and 4, if repetition of digits is allowed ??
(a) 374(b) 500(c) 375(d) 376
03. What is the number of distinct terms in the expansion of (a + b + c)20 ?
(a) 231(b) 253(c) 242(d) 210
04. What are the last two digits of 72008 ?
(a) 21 (b) 61 (c) 01 (d) 41
05. The integers 1, 2, 3, ... 40 are written on blackboard. The following operation is then repeated 39 times. In each repetition, any two numbers, say a and b, currently on the blackboard are erased and a new number a + b − 1 is written. What will be the number left on the board at the end ?
(a) 820(b) 821(c) 781(d) 819
06. An intelligence agency decides on a code of 2 digits selected from 0, 1, 2, ..., 9. But on the slip on which the code is hand written allows confusion between top and bottom, because there are

indistinguishable. Thus, for example, the code 91 could be confused with 16. How many codes are there such that there is no possibility of any confusion?
(a) 25 (b) 75 (c) 80 (d) None of these
07. A young girl counted in the following way on the fingers of her left hand. She started calling the thumb 1, the index finger 2, middle finger 3, ring finger 4, little finger 5, then reversed direction, calling the ring finger 6, middle finger 7, index finger 8 and thumb 9 and then back to the index finger for 10, middle finder for 11 and so on. She counted up to 1994. She ended on her ?
(a) thumb (b) index finger (c) middle finger (d) ring finger
08. Let U(n+1)= 2Un + 1, (n=0, 1, 2, ...) U0=0 then U(10) would be nearest to ?
(a) 1023 (b) 2047 (c) 4095 (d) 8195
09. The product of all integers from 1 to 100 will have the following numbers of zeros at the end ?
(a) 20 (b) 24 (c) 19 (d) 22
10. The number of positive integers not greater than 100, which are not divisible by 2, 3 or 5 is ?
(a) 26 (b) 18 (c) 31 (d) None of these
Answers : Find Detailed Solutions at the end of the the page.

1.	B	2.	D
3.	A	4.	C
5.	C	6.	C
7.	B	8.	A
9.	B	10.	A

MEDIUM IMPORTANCE:

Cost price of 4 calculators and 2 pencil is 6200. What is the cost of ten calculators and five pencils.
Sol: C+2P=6200-->2C+P=3100
SO 10C+5P=5(2C+P)=5(3100)=15,500 RS

12 men can complete work in 6 days whereas 10 men and 21 women take 3 days to finish the same work .in how many days can 12 women alone complete.
Sol: 10 men's, 1 day work=10/(12*6)=5/36
If 21 women's, 1 day work= 21/W ,then
3[(5/36)+(21/W)]= 1 ,On solving, W=108
So, 12 women can complete the work in 108/12=9 days

$27^{18}/14$ find the remainder value?
Sol: Any number of the form (a*x-1)^n /a the remainder will be +1 if the power n is even.
and the remainder will be -1 or (a-1) if the power is odd. According to this the remainder will be 1

What is the probability of getting a odd sum when two dice are thrown.
Sol: odd numbers 3,5,7,9,11(between 2(min sum)-12(max sum))

cases:- 3-(1,2),(2,1) 5-(3,2),(2,3),(4,1),(1,4)
7-(1,6),(6,1),(2,5),(5,2),(3,4),(4,3)
9-(3,6),(4,5),(5,4),(6,3) 11-(5,6),(6,5)
total cases=18 therefore probability=18/36=>1/2

If log(p+q)(p-q)= -1; then find the value of: log(p+q)(P^2-q^2)
Sol: log(p+q)(p^2-q^2)=log(p+q)^2(p-q)=log(p+q)^2 + log(p-q) = 2 log(p+q) + log(p-q) = log(p+q)+log(p+q)+log(p-q)
log(p+q)-1= log(p+q)-log 10= log (p+q)/10;

Find the number of consecutive zeros at the end of 72!
Sol: By using formula round(n/5)+round(n/25)+.....round(n/5^n)
round(72/5)+round(72/25)=14+2=16

Find the maximum value of n such that 77! is perfectly divisible by 720^n
Sol: 720 = (2^4) x (3^2) x (5)
Number of twos in 77! is: 38 + 19 + 9 + 4 + 2 + 1 = 73
So number of 2^4 will be: = 18
Similarly, Number of threes in 77! is:
25 + 8 + 2 = 35
So number of 3^2 will be: = 17
and number of fives will be:
= 15 + 3 = 18
Hence the number of 720s that we can obtain is 17.

Some persons can do a piece of work in 12 days. Two times the number of such persons will do half of that work in:
Sol: 3 days

If $\log_{10}2 = 0.3010$, what is the number of digits in 2^{64}
Sol: 2^{64}= 64 log2=64*0.3010=19.264
Characteristic(integral part of log) is one less than no. of digits. here characteristic=19; So no of digits=19+1.

$\log_y 1369y=3$ then what is the value of y?
Sol: y^3=1369y y^2=1369 y=37

4.28 and -3.28 are two numbers on a real number line. If 1 is added to both the numbers ,then which of the following is true?
a.Distance between the two numbers is 2 units more than the distance between 4.28 and -3.28
b.Distance between the two numbers is 2 units less than the distance between 4.28 and -3.28
c.Distance between the two numbers is equal to than the distance between 4.28 and -3.28
d.None
Ans:c
distance b/w 4.28 and -3.28 = 7.56
distance b/w 5.28 and -2.28 = 7.56

What is the greatest 4-digit perfect square, which is exactly divisible by 3, 5, 7 and 9?

a. 9999 b. 9684 c. 9801 d. Cannot be determined
e. 11025

What is the remainder when 17^{23} is divided by 16?
a. 1 b.0 c.2 d.3
Sol: Apply bionomial theorem. 17 can be written as (16+1)
similarly $17^{23} = (16+1)^{23}$
expand above equation using bionomial theorem then we get 24 terms, in that 23 terms contain 16^x as one term for x>0; 24th term will be $24c_{24}\ 1^{24} = 1$ when you divide 1 with 16 you get 1 as remainder.

Antilog10^{100}
Sol: All you need to know is that AntiLog(X) = 10^x.
so ans is $10^{(10^{100})}$

Four bells begin to toll together and then each one at intervals of 6 s, 7 s, 8 s and 9 s respectively. The number of times they will toll together in the next 2 hr is:
Sol: lcm of 6,7,8,9=504 sec; in 2 hrs =3600*2 sec
so no times they will ring =3600*2/504==14 times
21. The students are in the ratio 2:3:5.if 20 students are increased in each batch the ratio changes to 4:5:7 The total number of students in the three batches before the increase was
Sol: Let number of students be x
2x+20 : 3x+20 : 5x+20 = 4:5:7 --> x = 10
Initially the number of the students would be 20,30 and 50 --> 100 ans

Sum of money doubles itself in 9 years, in how many years it will become 8 times itself?
Sol: 27 years; 9yrs = 2(sum); 18yrs = 4(sum);
27yrs = 8(sum)

What is the smallest four-digit number which when divided by 6, leaves a remainder of 5 and when divided by 5 leaves a remainder of 3?
1. 1043 2. 1073 3. 1103 4.None of these
Sol: ans is none of these because :
let us assume the smallest 4 digit number be 1000 if we divide it with 6 we get remainder 4 so to get a rem of 5 add 1 to it => 1001.
Then the general form of a number is 1001+6k for every positive integer value of k it always yields rem 5 when divided by 6
then by trail and error if we take k=2 then number is 1013
which when divided by 5 gives a rem of 3
so the right ans is 1013 which is none of these from options

A, B, C started a business with their investments in the ratio 1:3:5. After 4 months, A invested the double amount as before and B as well as C withdrew half of their investments. The ratio of their profits at the end of the year is:
Sol: Let their initial investments be x, 3x and 5x respectively. Then,
A : B : C = (x * 4 + 2x * 8) : (3x * 4 + 3x/2 * 8) : (5x * 4 + 5x/2 * 8)
= 20x : 24x : 40x = 5 : 6 : 10.

There are 10 yes or no questions. How many ways can these be answered?

Sol: for 1 question 2 possibilities
for 2nd question 2 possibilities
for 3rd question 2 possibilities
.
.
..
.
2^{10}=1024

In an examination, 70% of students passed in physics, 65% in chemistry, 27% failed in both subjects. The percentage of students who passed is:
1. 66% 2. 62% 3. 69% 4. None of these
Sol: let's total student be 100
Passed in atleast one subject= 100-27=73.
73= 70+65-x(passed both subjects)
x=62.

If the simple interest on a sum at 4% per annum for 2 years is Rs. 80, then the compound interest on the same sum for the same period is:
1. Rs. 86.80 2. Rs. 86.10 3. Rs. 88.65 4. Rs. 81.60
Sol: S.I for 2 years is 80;
Then S.I for one year is 40. C.I for 2 years = S.I for 2 years + S.I for 40
=80+(40*4*1)/100=80+1.60=81.6
28. Prabodh bought 30 kg of rice at the rate of Rs. 8.50 per kg and 20 kg of rice at the rate of Rs. 9.00 per kg. He mixed the two. At what price (App.) per kg should he sell the mixture in order to get 20% profit?
1. Rs. 9.50 2. Rs. 8.50 3. Rs. 10.50 4. Rs. 12.00
Sol: 30*8.5+20*9=435
20% of 435 is 87
total= 435+87=522
522=50*x; x=10.44= 10.5(approx)

Mohan walks a certain distance and rides back in 6 hours and 15 minutes. If he walks both ways he takes 7 hours and 45 minutes. If Mohan rides both ways the time which he will take will be:
1. 4 hours 2. 19/4 hours 3. 9/2 hours 4. 17/4 hours 5. None of these
Sol: W+R=375 minutes(6 hours 15 minutes)
2W=465 minutes(& hours 45 minutes)
2R=?
2(W+R)=375*2=750
2R=750-465=285=19/4

In an examination 10 questions are to be answered choosing at least 4 from each of part A and part B. If there are 6 questions in part A and 7 in part B, in how many ways can 10 questions be answered ?
1. 212 2. 266 3. 272 4. 312 5. Correct Op
Sol: 266 = 6c4*7c6+6c5*7c5+6c6*7c4

A boy move 6 m in west then he turn towards south and move 20 m then turn towards east and move 12 m again move toward north and move 12 m . How much dist he is away from his starting point.

Sol: sqrt(8^2+6^2)=10

$3*(4^4+4^3+4^2+4+1) = ?$
Sol: $3*(4^5-1)/4-1$ (applying sum of n terms in G.P)
$=4^5-1= 1023$

$\log_{10} 2=.6096$ $\log_{10} 3=.4709$ then $\log_{10} 12 = ?$
Sol: $\log_{10} 12= \log_{10} (2^2*3)= \log_{10} 2^2+ \log_{10} 3= 2 \log_{10} 2+ \log_{10} 3=2*0.6096+0.4709= 1.6901$

log xy - log |x| = ?
Sol: log xy - log |x| = log x + log y - log |x| = log y
since $x > 0$ for log to be defined.
hence |x| = x

$\log_{25}625 - \log_{31}961 + \log_{29}841 =?$
Sol: 2-2+2=2

How many 5 digit nos are possible from 2,7,0,8,4 if the first digit is not zero
Sol: if there is no repetition then its equal to=4*4*3*2*1=96
if repetitions are allowed = 4*5*5*5*5=2500

400 have how many factors?
Sol: 15 factors....
$400=2^4*5^2$
no of factor=5*3=1

A box contain 6 yellow,3 red and 2 green ball 5 ball is randomly selected what is the probability that at least one ball is yellow.
Sol: probability=at least 1 ball yellow
=1-no ball yellow
=1-{(6C0*3C3*2C2)/11C5}
=1-(1/462)
=0.997

How many two digit numbers have exactly 5 factors?
Sol: for a two digit number to have 5 factors it must be a squared number and it must not be a square of prime number. the two numbers are,
4^2 = 16 = 1,2,4,8,16
9^2 = 81 = 1,3,9,27,81

How many four digit numbers have exactly 5 factors?
Sol: for any no. greater than 100 to have 5 factors it must be the 4th power of the prime number.
e.g, 5^4 = 625 = 1,5,25,125,625
7^4 = 2401 = 1,7,49,343,2401
11^4 = 14641 = 1,11,121,1331,14641
so the only 4 digit number having 5 factors is 2401
and two digit number having 5 factors are 16 and 81

15?1792 is divisible by 9 only when ?=
1.1 2.4. 3.3. 4.2.
Sol: 1+5+1+7+9+2=25=2+5=7+?=9 so ?=2

$2^{x+y}=2/2^{3/2}$; $2^{x-y}=2$; Find the values of x and y?
Sol: $2^{x+y}=2^{1-3/2}$; x+y=-1/2;
and $2^{x-y}=2^{1}$; x-y=1;
and x=1/4 y=-3/4

6 years back, Rom and Dom had their ages in the ratio 1:2. 6 years from now the ratio of their ages would be 3:4. What is the ratio of their ages today?
Sol: (x-6)/(y-6)=1/2 ....(1)
(x+6)/(y+6)=3/4 ..(2)
by solving these eqn, we get x=12 and y=18 i.e. 2/3

A locomotive engine, without any wagons attached to it, can go at a speed of 40 km/hr. Its speed is diminished by a quantity that varies proportionally as the square root of the number of wagons attached. With 16 wagons, its speed is 28 km/hr. The Op 1: 99 Op 2: 100 Op 3: 101 Op 4: 120 Op 5:

If 33 untrained labourers can do a work in 15 days of 12 hr. each, how many trained labourers can do 50% more work in 11 days of 9 hr each ? (It may be assumed that it takes 2 trained labourers to do the work of 5 untrained labourers) Op 1: 42 Op 2: 36 Op 3: 90 Op 4: 100 Op 5:
Sol: 5u=2t u=2/5t
(33*2t*15*12)/(5*xt*11*9)=2/3
x=36 op 2:36

|X - 5| + 4 > 0 and |X2| < 4. Then x can be: Op 1: 4 Op 2: 2 Op 3: 0.5 Op 4: All of these Op 5:
Sol: Op 3: 0.5; 4.5+4>0; &(0.5)^2

If $r = at^2$ and s = 2at, the relation among s, r and a is: 1. $s^2=4ar$ 2. s=ar 3. s=2ar 4. $s^2=ar$ 5. None of these
Sol: s=2at; squaring on both sides; $s^2=4a^2t^2=4a*\ at^2=4ar$; so option 1 is correct

If |x| + |y| = 7, then what is the sum of minimum and maximum values of x + y? 1. 3/2 2. -7 3. 7 4. 0 5.none
Sol: 0; as mod has property; |x|=x;x>0; =-x;x

If $x^4 + 1/x^4 = 47$, then find the value of $x^3 + 1/x^3$ 1. 18 2. 27 3. 9 4. 12
Sol: $(x^2+1/x^2)^2=x^4+1/x^4+2$
so $x^2+1/x^2=7$

$(x+1/x)^2=x^2+1/x^2+2=7+2=9$
so x+1/x=3;

now $(x+1/x)^3=x^3+3*x+3*1/x\ +1/x^3$
$3^3=x^3+3*3+1/x^3$
so $x^3+1/x^3=18$

If a, b, c are roots of the equation $x^3-4x^2+6.5x + 3.5 = 0$, then what is the value of $a^2 + b^2 + c^2$? a. 1 b. 64 c. 169 d.3 Sol: let l,m,n be roots of $ax^3+bx^2+cx+d=0$; then l+m+n=-b/a, lmn=-d/a, lm+mn+ln=c/a,
here a=1, b=-4, c=6.5
$a^2+b^2+c^2= (a+b+c)^2-2(ab+bc+ca)=3$.

If $1^3 + 2^3+ 3^3+ .....+ 9^3 = 2025$,then the value of $(0.11)^3 + (0.22)^3 + ...+ (0.99)^3$ is ?
Sol: $(11/100)^3 +(22/100)^3 + ...(99/100)^3$
take $(11/100)^3$ as common then
$(11/100)^3[1^3+2^3+3^3+ .....+9^3]$
$=(11/100)^3*2025= 2.695275$

In a purse there are 30 coins, twenty one-rupee and remaining 50-paise coins. Eleven coins are picked simultaneously at random and are placed in a box. If a coin is now picked from the box, find the probability of it being a rupee coin? Op 1: 4/7 Op 2: 1/2 Op 3: 2/3 Op 4: 5/6 Op 5:
Sol: 2/3

A ,B, C are three students who attend the same tutorial classes. If the Probability that on a particular day exactly one out of A and B attend the class is 7/10,Exactly one out of B and C attends is 4/10 exactly one out of A and C attends is 7/10.if the probability that all the three attend the class is 9/100 then find the probability that all at least one attends the class.
Sol: Probability(at least one attending) = 1- Probability(none attending)
Let the Probability of A,B,C attending the class be a,b,c
So not attending will be 1-a,1-b,1-c
Exactly one of A,B
$a(1-b) + b(1-a) = 7/10$
$a+b -2ab =7/10$

B,C
$b(1-c)+c(1-b) = 4/10$
$b+c -2bc =4/10$

C,A
$a(1-c) + c(1-a) =7/10$
$c+a -2ac=7/10$

Add all 3 u get
$2(a+b+c) - 2(ab+bc+ca) = 18/10$
$a+b+c -ab -bc-ca =9/10$

P(atleast one) = 1 - P(none)
$1 - [(1-a)(1-b)(1-c)]$
$1- [1 -a -b-c+ab+bc+ca -abc]$
$1-[1 - (9/10 + 9/100)]$
$= 99/100$

A box contains 10 balls numbered 1 through 10. Anuj, Anisha and Amit pick a ball each, one after the other, each time replacing the ball. What is the probability that Anuj picks a ball numbered less than that picked by Anisha, who in turn picks a lesser number than amit.
Sol:
67. A, B, C, D and E play the following game. Each person picks one card from the cards numbered 1 through 10. The person who picks the greatest numbered card loses and is out of the game. Now the remaining four return their cards to the pack and draw again, and again the person with the greatest numbered card loses. This process is repeated till only one person is left in the game that is declared the winner. What is the probability that A is the
winner?
Sol: Ans:1/5
Total five persons so anybody can be the winner.
68. a buy clips at 12 for R.s. 60 .How many clips should he sellfor Rs. 60 to earn a profit of 20% ?
Sol: x+0.2x=60;
x=50;
12 clips for 60
so 10 clips for 50.
ans:10

An article was sold for Rs. 2770. Had it been sold for Rs. 3000 there would have been an additional gain of 10%. Cost Price of the article is:
Sol: given selling price is = 2770
he said if we sell it for 3000 there would be a 10% more gain
3000-2770=230
because of this Rs.230 he can gain 10% more
from profit percentage formula
230*100/ cost price =10
from the above equation cost price is 2300

The probability that a man can hit a target is 3/4. He tries 5 times. The probability that he will hit the target at least three times is:
Sol: Hitting the target at least 3 times means it can be greater than 3 also i.e.3,4,5
in 5 chances hitting target by 3 times is
5c3*(3/4)^3*(1/4)^2 = 10*27/1024= 270/1024
probability of hitting by 4 times is
5c4*(3/4)^4(1/4)^1=5*81/1024= 405/1024
probability of hitting 5 times is
5c5*(3/4)^5 = 243/1024
total is (270+405+243)/1024= 918/1024
=459/512

A 5-digit number is formed by the digits 1,2,3,4 and 5 without repetition. What is the probability that the number formed is a multiple of 4?
Sol: any number is divisible with 4 iff last two digits should be divisible with 4.
so if last digit is 2 then 12, 32 and 52 can be last two digits. so 3* 3!
if last digit is 4 then only possibility is 24 so 3!
total= 3* 3! + 3!= 4!
so 4!/5!=1/5

In how many ways can a number 6084 be written as a product of two different factors ?
Sol: $6084 = 6 * 1014 = 6*6*169 = 2^2 * 3^2 * 13^2$
So the pairs will have either 0,1, or 2 powers of each of three prime numbers. But one of these has two identical numbers, and the rest come in pairs of duplicates.
The answer is $((3*3*3)-1)/2 + 1 = 13$.

A lady gives dinner party to five guests to be selected from 9 friends .The number of ways of forming the party of 5,given that two of the friends will not attend the party together is
Sol: No of guests to be invited=5
Therefore,
No of ways forming the party= (9-2)c5*2c0+(9-2)c4*2c1 =7c5*1+7c4*2 =91

There are 5 letters and five addressed envelops. the number of ways in which all the letters can be put in wrong envelops is:
Sol: We have N letters and N envelopes. The Letters can be put in the N envelopes in N! ways . We want to count the Number of "Derangements" (The no. of ways that no letter goes into right envelope).

N!(1- 1/1! + 1/2! - 1/3! +.....+(-1)n 1/n!) (this the the formula).
Here N = 5.
So When We put N = 5 in Formula we get 44 ans.

A five -digit number divisible by 3 is to be formed using numerals 0,1,2,3,4 and 5 without repetition. The total number of ways this can be done is:
Sol: we have 5 place to arrange this no. and the total should be divisible by 3
no. are :- 0,1,2,3,4,5
take five no.
0+1+2+3+4=10(not divisible by 3)
1+2+3+4+5=15(divisible by 3) possible combination 5!=120
2+3+4+5+0=14(not divisible by 3)
3+4+5+0+1=13(not divisible by 3)
4+5+0+1+2=12(divisible by3)
so these no. we can take, but remember that we can not take 0 at 1st place so
possible combination is 4*4*3*2*1=96
5+0+1+2+3=11(not divisible by 3)
total no.is=120+96=216

Mark price of a good is 45 Rs. If seller sells it at 42 Rs as discount price and also want 5 % profit then what will be cost price?
Sol: x+0.05x=42; then x=40

In a bag there are 5 white, 8 red, 2 black and 3 blue balls. what is probability that ball picked is red or black?
Sol: Total balls=18; Probability=red/tot + black/tot ; 10/18 =5/9

How many 4 digit even no. is possible by 1,2,3,4 if no one is repeated?
Sol= 3! + 3! =12

$\log_3 9 - \log_4 256 + \log_5 125 = ?$
Sol: 2-4+3=1;

If a=2 & b=1 then $\log_{(a+b)}(a^2-b^2) = ?$
Sol: substitute a= and b=1 in $\log_{(a+b)}(a^2-b^2) = \log_3 3 = 1$

A coin is tossed 3 times by raju. what is probability that raju win all three time?
Sol: 1/2 * 1/2 * 1/2 = 1/8

If there are 5 different roads to go into a city then no. of ways to go and back to home?
Sol: 25,if one goes using 1st road,there are 5 roads to come back.....so 5*5, 25 is the ans

Probability of finding 9 of hearts from deck of 52 cards ?
Sol: there is only 1,9 of heart is present in a deck of 52 cards. so probability of finding 9 of heart=1/52

$\log_{\sqrt{6}} 1296 = ?$
Sol: $\log_{\sqrt{6}} 6^4 = 8$;

Hemant and Ajay start a two-length swimming race at the same moment but from opposite ends of the pool. They swim in lane and at uniform speed, but Hemant is faster than Ajay.They first pass at a point 18.5 m from the deep end and having completed one length, each one is allowed to rest on the edge for exactly 45 seconds.After setting off on the return length, the swimmers pass for the second time just 10.5 m from the shallow end.How long is the pool?
Sol:

A and B start together from the same point on a circular track and walk in the same direction till they both again arrive together at the starting point. A completes one circle in 224 s and B in 364 s. How many times will A have passed B?
Sol: 13 times; LCM of 224,364=2912;so, A does 13 circles while B does 8 in 2912s.
Thus A crosses B 13 times.
Which is more-successive discount of 40% of 30 % OR flat 70% ?
Sol: flat 70%;
because on Rs. 100 ,
successive discount of 40% of 30 %=100*0.6*0.7=42;
flat 100*0.3=30,
so discount of 70% is more

If log(base p)25p=2.Find the value of P?
Sol: $p^2 = 25*p$ so p=25;

49 pumps can empty a reservor 6 1/2 days, working 8 hours a day. if 196 pumps are used for 5 hours a day , then the same work will completed in. 1. 2.6 days 2. 3 days 3. 2.5 days 4. 2 day
Sol: 49*13/2*8=196*x*5
x=2.6 days

If 7 spider make 7 webs in 7 days then 1 spider will make 1 web in how many days? 1.1 2.7 3. 7/2 4.49

Sol: 7 Days

Ravi brought 300 liter of milk at Rs 19 per liter. he added 200 liter ofd water to it and sold 400 of milk at rs 20 per liter.to the rest, he added 10 liter more water to it and then sold it for rs. 15 per liter.if he used miniral water that cast iRs 10 per liter.then the money earned by ravi is: 1. 4000 2.4500 3.1800 4.1850
Sol: total cost price will be.. (300*19 + 210 *10)as 300 lt of was purachsed @ rs 19 and 210 lts of water is added @ rs 10. sp will be , (400*20 + 110 *15)
so CP = 7800 & SP = 9650
profit = 9650 -7800 = 1850

$2^{x+y}=2*(2)^{1/2}$ and $2^{x-y}= 2^{1/2}$, the value of x is. 1.1 2.2 3.3 4.4 5.none of these
Sol: as compare the powers of both eq's
such that x+y= 3/2; x-y=1/2; on solving x=1

Whats the value 1%(modulus) 160/130; 1.160/130 2.1/130 3.1/160 4. 130/160
Sol: 1 %160/130
ie % having higher priority compare to /
so it is calculated as (1%160)/130
so 1/130

Revati brought a machine of 4,50,000 and sold it to raghu at profit . Raghu sold the machine to danush at loss of 10% for 4 95 000 . wt profit got revati ?
Sol: raghu's cp is revati's sp.
raghu's cp= (100/90)*4,95,000= 550000.
profit %= (100000/450000)*100= 22.22.
answer is 4. 22.22%

What is prabablity to getting at least one of tail . when two coins are tossed simultaineouly?
Sol:3/4

in out of 52 cards, 4 cards to be are selected and one card of it should be spade and one card card should be heart. in How many ways can these card selected
Sol: There are 13 spades and 13 heart cards in pack of 52
we need to select 4 cards and one is from spades and one is from hearts and remaining 2 are form remaining cards
ie 13c1 * 13c1 * 50c2
13^2*50c2

In the election, the wining candidate won by 15% of votes. if a total 5000 votes were cast of which is 86% where eligible. then how many votes the wining candidate get?
Sol: 86% votes are eligible in 5000
so the number of votes are 5000*86/100=4300
now if loss candidate get x votes then winning one gets 15%more than that of x
ie the total votes is equal to the winning and loss candidate votes
x + (x*115/100)= 4300
from it x = 2000

now we need to calculate for winning candidate
ie x*115/100 = 2000*115/100 = 2300
114. 47,322 bulb are to be packed in several boxes. Each box should contains equal Numbers of bulbs and no bulb should be unpacked number of boxed used can be:
1. 12 2. 11 3. 8 4. 14
Sol: Only 11 can divide the given number.

How many 4 digit number can we made from 1 2 3 4 5 6 and 7 with none of digits being repeated?
Sol: 7*6*5*4=840

What is the value of $(10101)_2$ in decimal form
Sol: 21
Wts is price of a pair of sandles is decreased by 10% the number of pair sold incresed by 20%. wt is nxt effect on sells?
1.8% decreases 2.10% decreases 3.10% increases 4. 8% increases
Sol: let price of sandles is x= 100rs.
price is decreased by 10%; x=90rs;
now it is increased by 20%; x=x + 20%(90)
x=90+18; x=108; means increases 8%;

What is the value of $\log_7(1/49)$
Sol: -2
119. 18.3454545nis equalent to;
1 1009/55 2.1009/99 3.342/990 4. 345/99
Sol: option 1.

Price of salt is increased by 25% in order not to increase the expenditure a lady must reduce her consumption by:
Sol: let's say lady need 1 salt packet per month and cost is 100 rupees
now salt packet rate is increased by 25% so new price will be 125.
but lady should not increase the expenditure, then how much she can buy with 100 rupees= 100/125
rate of decrease is given by ((1- (100/125))1)*100 = 20

How money factors does 400 have?
Sol: 15

What is square root of 54 05 625?
Sol: use square root division method.... taking groups of 5 40 56 25
ans is :2325

$\log_4 2+\log_4 32$ is equals to
Sol: 4

Product of any two odd numbers is:
a.always odd b.always even c.sometimes odd and same times even d.divisible by 6
Sol: (a)

Suparna needs to browse through 75pages of a novel before she gives her review to the class. She has 2.5 hrs before the lecture. What should be her reading speed in pages/hour?

1. 16
2. 30
3. 20
4. 22

The value of log100.1 is :

1. 0
2. -1
3. -10
4. -100

A written exam consists of 6 questions with the answer options as yes/no/none. In how many ways can the examinees select the answers

1. 6 ways
2. 6 ways
3. 3.3.3.3.3
4. $(3^6$

What is the sum of the two consecutive numbers, the difference of whose squares is 19?

1. 9
2. 10
3. 18
4. 19

P is an integer. P>883. If (p-7) is a multiple of 11, then the largest number that will divide (p+4) (p+15) is :

1. 11
2. 121
3. 242
4. None of the above

Find the least number which when divided by 5, 7 and 13 leaves the same remainder 3 in each case

1. 398
2. 453
3. 458
4. 463

Which number should be subtracted from 321 so that it becomes prime?

1. 2
2. 4
3. 6
4. 9

$2^8X2^2 =$

1. 4^{10}
2. 2^{10}
3. 2^{16}
4. 4^{16}

What will be the value of the expression $a^{8/3} * a^{-6/9}$?

1. a^{-2}
2. a^{-1}
3. a^{0}
4. a^{1}
5. a^{2}

What is the square root of 576/9?

1. 4
2. 8
3. 12
4. 16

Which number is the fourth power of 7?

1. 2401
2. 2421
3. 2601
4. 2621

HCF of two numbers is 11 and their LCM is 693. If one number is 77, find the other number?

1. 7
2. 9
3. 63
4. 99

Recycling 900 kg of paper saves 17 trees . How many trees are saved when 1200 kg of paper are recycled?

1. 19
2. 25
3. 20
4. 22

How many different four letter words can be formed (the words need not to be meaningful) using the letters of the word PACIFIC such that the first letter is p and the last letter is F?

1. 8
2. 3
3. 6
4. 7!/5!

Mauli purchased a designer saree from Mumbai at $8/9^{th}$ of its MRP. When she came back to Delhi, her neighbour coaxed mauli to sell the saree to her. She was even ready to pay 9% more than its MRP. What would Mauli's gain percentage be, if she decides to sell the saree to her neighbour?

1. 15.59%
2. 16.61%
3. 20.36%
4. 22.65%

A goods carriage of length 2km, headed to Srinagar from Punjab was running at a speed of 30 km/hr. It crosses a tunnel which is 58 km long with that speed. Find the time taken by the goods carriage to cross the tunnel?

1. 4 hours
2. 3 hours
3. 2 hours
4. 1 hour

A lucky draw is organized as part of the first anniversary celebration of new Age Company. There are 25 chits in a bowl one for each employee and the chits are marked from 1-25. Sarika and Rajesh have chits marked with numbers that are multiples of 3 or 7. They want to know if there are chances of them being awarded the trip to Goa which is the first prize of the lucky draw. When one chit is drawn at random, what is the probability that the chit has a number which is a multiple of 3 or 7?

1. 3/25
2. 2/11
3. 11/25
4. 10/25

What is the loss percentage incurred by a company when it buys an asset for Rs. 1,50,000 and sells it for Rs. 75,500?

1. 49.67%
2. 49.34%
3. 98.68%
4. 98.34%

If Ruparno is expected to spend Rs. 2,300 on electricity bill in the first 3 months of the year, what amount can he be expected to spend on electricity bill for the rest of the year?

1. Rs. 5,400
2. Rs. 5,700
3. Rs. 6,200
4. Rs. 6,900

Out of every 100 people in police department, 10 are women. Out of every 100 people in military forces, 3 are women. In a batch of 180 police personnel and 200 army personnel, how many of them would be women?

1. 24
2. 30
3. 18
4. 6

Probability of one of the power plants over heating is 0.15 per day and the probability of failure of the backup cooling system is 0.11. if these events are independent, what is the probability of 'big trouble' (i.e., both evnets taking place)?

1. 0.35
2. 0.0185
3. 0.0165
4. 0.26

There are 5 clients and 5 consultants in a round table meeting. In how many ways can the clients be seated such that no consultant is next to the other consultant?

1. 5!6!
2. 4! 4!
3. 4! 5!
4. 9!
5. 10 5! 4!

The question consists of two statements- A and B. find out if the information given in the statement(s) is sufficient to find the solution to the problem.

Given:

A: Probability of finding a Red marble is the same as that of a Green marble but is double that of finding a Yellow marble.

B: There are 6 Green marbles in the jar.

1. if the question can be answered by using statement A alone but not by using B alone
2. if the question can be answered by using statement B alone but not by using A alone
3. if the question can be answered by using either statements alone
4. if the question can be answered by using both the statements together but not by either statement alone

Evaluate : $\log_5^3 17^6$

1. $2 \log_5 17$
2. $\log_5 17$
3. $\log_5 17^{18}$
4. $0.5 \log_{17} 5$
5. $2 \log_{125} 17$

If a=5 and b=4 then, what is the value of lof(a-b)(a^2-b^2-2b)?

1. -1
2. 0
3. 1
4. undefined

Pick the odd man out.

1. ACFJ
2. CEHL
3. PRUY

4. SUXZ

3, 15, 35, 63....

1. 101
2. 121
3. 99
4. 98

Based on the given passage find out which of the following statements can be inferred from the passage.

According to a recent study, in the local municipal elections, the candidate who interacts more with the Resident's Welfare Associations and wins their trust will get the maximum name recognition name in the elections.

1. local resident's welfare associations are the most important factor in elections in the city
2. Maximum name recognition will help a candidate will help a candidate win a higher percentage of votes cast during the election
3. Resident's welfare associations exert a a lot of influence over the voting population residing in the city.
4. For maximum name recognition a candidate need not spend a lot of money on posters, banners and advertising campaigns.

Decode the word(s) / pattern given in the question

If TENNIS is coded as UDOMJR, then CRICKET is coded as:

1. DPJBMDV
2. DQJBMEU
3. DQJBLDU
4. BSHDJFS

Choose the right answer

Pick the odd man out

1. STV
2. XYA
3. KKT
4. BDE

Find the next number in the series.

18, 19, 21, 24, ...

1. 26
2. 25
3. 27
4. 28

Set 3

Ques 1 : Choose the correct answer.

If the sum of two numbers is 55 and the H.C.F. and L.C.M of these numbers are 5 and 120 respectively, then the sum of the reciprocals of the numbers is equal to:

Option 1 : 55/601
Option 2 : 601/55
Option 3 : 11/120
Option 4 : 120/11

Correct Answer :11/120

Ques 2 : Choose the correct answer.

Three different containers contain 496 litres, 403 litres and 713 litres of mixtures of milk and water respectively. What biggest measure can measure all the different quantities exactly ?

Option 1 : 1 litre
Option 2 : 7 litre
Option 3 : 31 litre
Option 4 : 41 litre

Correct Answer :31 Liters

Ques 3 : Choose the correct answer.
Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together ?

Option 1 : 4
Option 2 : 10
Option 3 : 15
Option 4 : 16

Correct Answer : 16

Ques 4 : Choose the correct answer.
Four different electronic devices make a beep after every 30 minutes, 1 hour, 3/2 hour and 1 hour 45 minutes respectively. All the devices beeped together at 12 noon. They will again beep together at:

Option 1 : 12 midnight
Option 2 : 3 a.m.
Option 3 : 6 a.m.
Option 4 : 9 a.m.

Correct Answer : 9am

Ques 5 : Choose the correct answer.

The number of prime factors of (3 x 5)12 (2 x 7)10 (10)25 is:

Option 1 : 47
Option 2 : 60
Option 3 : 72
Option 4 : None of these

Correct Answer : None Of These

Ques 6 : Choose the correct answer.
What least value must be assigned to * so that the number 63576*2 is divisible by 8?

Option 1 : 1
Option 2 : 2
Option 3 : 3
Option 4 : 4

Correct Answer :3

Ques 7 : Choose the correct answer.
Which of the following numbers is exactly divisible by 24 ?

Option 1 : 35718
Option 2 : 63810
Option 3 : 537804
Option 4 : 3125736

Correct Answer :3125736

Ques 8 : Choose the correct answer.
The number nearest to 15207, which is divisible by 467, is:

Option 1 : 14342
Option 2 : 15211
Option 3 : 14944
Option 4 : 15411
Option 5 : None of these

Correct Answer :15411

Ques 9 : Choose the correct answer.
The smallest number, which is a perfect square and contains 7936 as a factor is:

Option 1 : 251664
Option 2 : 231564
Option 3 : 246016

Option 4 : 346016
Option 5 : None of these

Correct Answer :246016

Ques 10 : Choose the correct answer.
In a division problem, the divisor is twenty times the quotient and five times the remainder. If remainder is 16, the number will be:

Option 1 : 3360
Option 2 : 336
Option 3 : 1616
Option 4 : 20516
Option 5 : None of these

Correct Answer :336

Ques 11 : Choose the correct answer.
The L.C.M. of two numbers is 4800 and their G.C.M. is 160. If one of the numbers is 480, then the other number is:
Option 1 : 1600
Option 2 : 1800
Option 3 : 2200
Option 4 : 2600
Option 5 : None of these

Ques 12 : Choose the correct answer.
The L.C.M. of two numbers is 140. If their ratio is 2:5, then the numbers are:

Option 1 : 28,70
Option 2 : 28,7
Option 3 : 8,70
Option 4 : 8,40
Option 5 : None of these

Ques 13 : Choose the correct answer.
If a number is exactly divisible by 85, then what will be the remainder when the same number is divided by 17?

Option 1 : 3
Option 2 : 1
Option 3 : 4
Option 4 : 0

Ques 14 : Choose the correct answer.
The least perfect square number which is exactly divisible by 3, 4, 7, 10 and 12 is:

Option 1 : 8100

Option 2 : 17600
Option 3 : 44100
Option 4 : None of these

Ques 15 : Choose the correct answer.
(xn+yn) is divisible by (x-y):

Option 1 : for all values of n
Option 2 : only for even values of n
Option 3 : only for odd values of n
Option 4 : for no values of n

Ques 16 : Choose the correct answer.
The greatest number that will divide 63, 138 and 228 so as to leave the same remainder in each case:
Option 1 : 15
Option 2 : 20
Option 3 : 35
Option 4 : 40

Ques 17 : Choose the correct answer.
Find the largest number, smaller than the smallest four-digit number, which when divided by 4,5,6 and 7 leaves a remainder 2 in each case.
Option 1 : 422
Option 2 : 842
Option 3 : 12723
Option 4 : None of these

Ques 18 : Choose the correct answer.
What is the highest power of 5 that divides 90 x 80 x 70 x 60 x 50 x 40 x 30 x 20 x 10?
Option 1 : 10
Option 2 : 12
Option 3 : 14
Option 4 : None of these

Ques 19 : Choose the correct answer.
If a and b are natural numbers and a-b is divisible by 3, then a3-b3 is divisible by:
Option 1 : 3 but not by 9
Option 2 : 9
Option 3 : 6
Option 4 : 27

Ques 20 : Choose the correct answer.
What is the greatest positive power of 5 that divides 30! exactly?
Option 1 : 5
Option 2 : 6
Option 3 : 7
Option 4 : 8

Ques 21 : Choose the correct answer.
In how many ways can a number 6084 be written as a product of two different factors ?
Option 1 : 27
Option 2 : 26
Option 3 : 13
Option 4 : 14

Ques 22 : Choose the correct answer.
What is the smallest four-digit number which when divided by 6, leaves a remainder of 5 and when divided by 5 leaves a remainder of 3?
Option 1 : 1043
Option 2 : 1073
Option 3 : 1103
Option 4 : None of these

Ques 23 : Choose the correct answer.
P is an integer. P>883. If P-7 is a multiple of 11, then the largest number that will always divide (P+4) (P+15) is:
Option 1 : 11
Option 2 : 121
Option 3 : 242
Option 4 : None of these

Ques 24 : Choose the correct answer.
Let C be a positive integer such that C + 7 is divisible by 5. The smallest positive integer n (>2) such that C + n2 is divisible by 5 is:
Option 1 : 4
Option 2 : 5
Option 3 : 3
Option 4 : Does not exist

Ques 25 : Choose the correct answer.
Four bells begin to toll together and then each one at intervals of 6 s, 7 s, 8 s and 9 s respectively. The number of times they will toll together in the next 2 hr is:
Option 1 : 14 times
Option 2 : 15 times
Option 3 : 13 times
Option 4 : 11 times

Ques 26 : Choose the correct answer.
The product of two numbers is 16200. If their LCM is 216, find their HCF.
Option 1 : 75
Option 2 : 70
Option 3 : 80
Option 4 : Data inconsistent

Ques 27 : Choose the correct answer.

There are four prime numbers written in ascending order of magnitude. The product of first three is 385 and that of last three is 1001. Find the first number.
Option 1 : 5
Option 2 : 7
Option 3 : 11
Option 4 : 17

Ques 28 : Choose the correct answer.
M and N are two distinct natural numbers. HCF and LCM of M and N are K and L respectively. A is also a natural number, which of the following relations is not possible?
Option 1 : K*L=A
Option 2 : K*A=L
Option 3 : L*A=K
Option 4 : None of these

Ques 29 : Choose the correct answer.
On dividing a number by 999,the quotient is 366 and the remainder is 103.The number is:
Option 1 : 364724
Option 2 : 365387
Option 3 : 365737
Option 4 : 366757

Ques 30 : Choose the correct answer.
The difference between two numbers is 1365.When the larger number is divided by the smaller one ,the quotient is 6 and the remainder is 15.The smaller number is:
Option 1 : 240
Option 2 : 270
Option 3 : 295
Option 4 : 360

Ques 31 : Choose the correct answer.
The ratio of two numbers is 3:4 and their HCF is 4.Their LCM is:
Option 1 : 12 Option 2 : 16 Option 3 : 24 **Option 4 : 48**

Ques 32 : Choose the correct answer.
A rectangular courtyard 3.78 meters long and 5.25 meters wide is to be paved exactly with square tiles ,all of the same size. What is the largest size of the tile which could be used for the purpose?
Option 1 : 14 cm **Option 2 : 21 cm** Option 3 : 42 cm Option 4 : None of these

Ques 33 : Choose the correct answer.
The least perfect square which is divisible by 3, 4, 5, 6, 8 is:
Option 1 : 900 Option 2 : 1200 Option 3 : 2500 **Option 4 : 3600**

Ques 34 : Choose the correct answer.
What will be obtained if 8 is subtracted from the HCF of 168, 189, and 231?
Option 1 : 15 Option 2 : 10 Option 3 : 21 **Option 4 : None of these**

Ques 35 : Choose the correct answer.

The largest four digit number which is a multiple of 8, 10,12 and 15 is:
Option 1 : 120 Option 2 : 9600 Option 3 : 9840 **Option 4 : 9960**

Ques 36 : Choose the correct answer.
If logx (0.1) = -1/3, then the value of x is:
Option 1 : 10 Option 2 : 100 **Option 3 : 1000** Option 4 : 1/1000

Ques 37 : Choose the correct answer.
If ax = by, then:
Option 1 : log(a/b) = x/y Option 2 : log(a) / log(b) = x/y **Option 3 : log(a) / log(b) = y/x** Option 4 : None of these

Ques 38 : Choose the correct answer.
If log8 x + log8 (1/6) = 1/3 then the value of x is:
Option 1 : 12 Option 2 : 16 Option 3 : 18 Option 4 : 24

Ques 39 : Choose the correct answer.
If log x + log y = log (x + y), then:
Option 1 : x = y Option 2 : xy=1 Option 3 : y = (x-1)/x **Option 4 : y = x/(x-1)**

Ques 40 : Choose the correct answer.
If log10 7 = a, then log10(1/70) is equal to:
Option 1 : -(1 + a) Option 2 : (1 + a)-1 Option 3 : a/10 Option 4 : 1/10a

Ques 41 : Choose the correct answer.
If log{(a+b)/3} = 0.5(log a + log b), then the correct relation between a and b is:
Option 1 : a2+b2 = 7ab Option 2 : a2-b2 = 7ab Option 3 : (a+b)2 = 2 Option 4 : (a+b)/3 = (1/2)(a+b)
Option 5 : None of these

Ques 42 : Choose the correct answer.
If log x = log 3 + 2 log 2- (3/4) log 16. The value of x is:
Option 1 : 1/2 Option 2 : 1 **Option 3 : 3/2** Option 4 : 2 Option 5 : None of these

Ques 43 : Choose the correct answer.
If log x =(1/2) log y = (1/5) log z, the value of x4y3z-2 is:
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3 Option 5 : None of these

Ques 44 : Choose the correct answer.
If log10000 x = -1/4, then x is given by:
Option 1 : 1/100 **Option 2 : 1/10** Option 3 : 1/20 Option 4 : none of these

Ques 45 : Choose the correct answer.
The value of 3-1/2 log3(9) is:
Option 1 : 3 **Option 2 : 1/3** Option 3 : 2/3 Option 4 : none of these

Ques 46 : Choose the correct answer.
loge xy - loge |x| equals to:
Option 1 : loge x Option 2 : loge |x| Option 3 : - loge x **Option 4 : none of these**

Ques 47 : Choose the correct answer.
The value of (loga n) / (logab n) is given by:
Option 1 : 1 + loga b Option 2 : 1 + logb a Option 3 : loga b Option 4 : logb a

Ques 48 : Choose the correct answer.
If (a4 - 2a2b2 + b4)x-1 = (a-b)2x (a+b)-2, then x equals to:
Option 1 : (a - b) / (a + b) Option 2 : log (a2 - b2) Option 3 : log (a + b) / log (a - b) **Option 4 : log (a - b) / log (a + b)**

Ques 49 : Choose the correct answer.
If a, b, and c are in geometric progression then loga n, logb n and logc n are in:
Option 1 : AP Option 2 : GP **Option 3 : HP** Option 4 : None of these

Ques 50 : Choose the correct answer.
What is the value of antilog10100?
Option 1 : 2 **Option 2 : 10100** Option 3 : 100 Option 4 : 10

Ques 51 : Choose the correct answer.
If antilog x 5 = 30, what can you infer about x?
Option 1 : x is a number between 1 and 2 Option 2 : x is 305 Option 3 : x is a number between 2 and 3
Option 4 : None of these

Ques 52 : Choose the correct answer.
Every time x is increased by a given constant number, y doubles and z becomes three times. How will log(y) and log(z) behave as x is increased by the same constant number?
Option 1 : Both will grow linearly with different slopes Option 2 : Both will grow linearly with same slopes
Option 3 : y will grow linearly, while z will not Option 4 : z will grow linearly, while y will not

Ques 53 : Choose the correct answer.
x triples every second. How will log2x change every second?
Option 1 : It will double every second Option 2 : It will triple every second **Option 3 : It increases by a constant amount every second.** Option 4 : None of these

Ques 54 : Choose the correct answer.
f(x) grows exponentially with x, how will f(log(x)) grow?
Option 1 : Exponentially **Option 2 : Linearly** Option 3 : Quadratically Option 4 : None of these

Ques 55 : Choose the correct answer.
What is the value of log512 8?
Option 1 : 3 **Option 2 : 1/3** Option 3 : -3 Option 4 : -1/3

Ques 56 : Choose the correct answer.
What is the value of log7 (1/49)?
Option 1 : 2 Option 2 : 1/2 Option 3 : -1/2 **Option 4 : -2**

Ques 57 : Choose the correct answer.
Given that log64 x = 2/6, what is the value of x?
Option 1 : 2 **Option 2 : 4** Option 3 : 6 Option 4 : 8

Ques 58 : Choose the correct answer.
If 7x = 85, what is the value of x?
Option 1 : log785 Option 2 : log857 Option 3 : log107 Option 4 : log1085

Ques 59 : Choose the correct answer.
If log102 = 0.3010, what is the number of digits in 264
Option 1 : 19 **Option 2 : 20** Option 3 : 18 Option 4 : None of these

Ques 60 : Choose the correct answer.
What is log110?
Option 1 : 1 Option 2 : 10 Option 3 : 0 **Option 4 : Tends to infinity**

LOW IMPORTANCE:

Ques 61 : Choose the correct answer.
What is log100 ?
Option 1 : 0 Option 2 : 10 Option 3 : 1 **Option 4 : Not defined**

Ques 62 : Choose the correct answer.
What is the value of log3 (-9)?
Option 1 : 3 Option 2 : 1/3 Option 3 : -3 **Option 4 : Not defined**

Ques 63 : Choose the correct answer.
Rajeev multiplies a number by 10, the log (to base 10) of this number will change in what way?
Option 1 : Increase by 10 **Option 2 : Increase by 1** Option 3 : Multiplied by 10 Option 4 : None of these

Ques 64 : Choose the correct answer.
The logarithm of a very small positive number will tend to which of the following?
Option 1 : 0 **Option 2 : negative infinity** Option 3 : positive infinity Option 4 : 1

Ques 65 : Choose the correct answer.
If n numbers are in geometric progression, the logarithm of the number will be in which of the following?
Option 1 : Geometric Progression **Option 2 : Arithmetic Progression** Option 3 : Harmonic Progression
Option 4 : None of these

Ques 66 : Choose the correct answer.
Which of the following is equivalent to log(a + b) ?
Option 1 : log a + log b Option 2 : log a * log b Option 3 : log a - log b **Option 4 : None of these**

Ques 67 : Choose the correct answer.
What is the value of log3 (1/9) + log 9 81 ?
Option 1 : 2 Option 2 : -2 **Option 3 : 0** Option 4 : 4

Ques 68 : Choose the correct answer.
What is the value of log3 1.5 + log3 6 ?
Option 1 : 2 Option 2 : 2.7 Option 3 : 1.8 Option 4 : None of these

Ques 69 : Choose the correct answer.
Which of the following is log8 x equivalent to?
Option 1 : log2 (x/3) Option 2 : log2 (3x) **Option 3 : (log2x)/ 3** Option 4 : None of these

Ques 70 : Choose the correct answer.
If n numbers are in arithmetic progression, the logarithm of the number will be in which of the following?
Option 1 : Exponentially Option 2 : Linearly Option 3 : Quadratically **Option 4 : None of these**

Ques 71 : Choose the correct answer.
What is the value of log20 1 ?
Option 1 : 0 Option 2 : 1 Option 3 : 20 Option 4 : None of these

Ques 72 : Choose the correct answer.
The unit's digit in the product (771 x 659 x 365) is
Option 1 : 1 Option 2 : 2 **Option 3 : 4** Option 4 : 6

Ques 73 : Choose the correct answer.
1.52 * 0.02251/2 = ?
Option 1 : 0.0375 **Option 2 : 0.3375** Option 3 : 3.275 Option 4 : 32.75

Ques 74 : Choose the correct answer.
If x1/2 / 4411/2 = 0.02, the value of x is:
Option 1 : 0.1764 Option 2 : 1.764 Option 3 : 1.64 Option 4 : 2.64

Ques 75 : Choose the correct answer.
The value of 21/2 upto three places of decimal is
Option 1 : 1.41 Option 2 : 1.412 Option 3 : 1.413 **Option 4 : 1.414**

Ques 76 : Choose the correct answer.
The value of (8-25- 8-26) is:
Option 1 : 7 x 8-25 **Option 2 : 7 x 8-26** Option 3 : 8 x 8-26 Option 4 : None of these

Ques 77 : Choose the correct answer.
If 22n-1 = (1 / 8n-3) then the value of n is:
Option 1 : 3 **Option 2 : 2** Option 3 : 0 Option 4 : -2

Ques 78 : Choose the correct answer.
If 2x = 3y = 6-z, then (1/x + 1/y + 1/z)
is equal to:
Option 1 : 0 Option 2 : 1 Option 3 : 3/2 Option 4 : -0.5

Ques 79 : Choose the correct answer.
What is the remainder when 1723 is divided by 16?
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3

Ques 80 : Choose the correct answer.
What will be the remainder when 1336 is divided by 2196?
Option 1 : 0 **Option 2 : 1** Option 3 : 12 Option 4 : 2195

Ques 81 : Choose the correct answer.
The roots of the equation 4x-3*2x+2+32=0 would include-
Option 1 : 2, 3 Option 2 : 1, 2, 3 Option 3 : 1, 2 Option 4 : 4, 8

Ques 82 : Choose the correct answer.
If ax =b, by=c and cz =a, then the value of xyz is:
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3

Ques 83 : Choose the correct answer.
If x = 1+21/2 and y=1-21/2, then x2+y2 is -
Option 1 : 2 Option 2 : 3 **Option 3 : 6** Option 4 : 0

Ques 84 : Choose the correct answer.
If 4x+3 = 2x+7, then the value of x is:
Option 1 : 3 Option 2 : 2 **Option 3 : 1** Option 4 : None of these

Ques 85 : Choose the correct answer.
2x+y = 2*(2)1/2 and 2x-y = 21/2,the value of x is:
Option 1 : 1 Option 2 : 2 Option 3 : 3 Option 4 : 4 Option 5 : None of these

Ques 86 : Choose the correct answer.
If x = 8, y = 27, the value of (x4/3+y2/3)1/2 is:

Option 1 : 5 Option 2 : 6 Option 3 : 7 Option 4 : 8 Option 5 : None of these

Ques 87 : Choose the correct answer.
If xy = yx and x = 2y, the value of y is:
Option 1 : 1 **Option 2 : 2** Option 3 : 3 Option 4 : 4 Option 5 : None of these

Ques 88 : Choose the correct answer.
If 2x * 3y = 18 and 22x * 3y= 36, the value of x is:
Option 1 : 0 **Option 2 : 1** Option 3 : 2 Option 4 : 3 Option 5 : None of these

Ques 89 : Choose the correct answer.
What is the value of 500 ?
Option 1 : 0 **Option 2 : 1** Option 3 : 50 Option 4 : None of these

Ques 90 : Choose the correct answer.
What is the value of 6-2 ?
Option 1 : 1/36 Option 2 : 36 Option 3 : -36 Option 4 : None of these

Ques 91 : Choose the correct answer.
What is the value of 0-10 ?
Option 1 : 0 Option 2 : 1 Option 3 : -10 **Option 4 : None of these**

Ques 92 : Choose the correct answer.
What is the value of 251.5 ?
Option 1 : 325 Option 2 : 32.5 **Option 3 : 125** Option 4 : None of these

Ques 93 : Choose the correct answer.
What is the value of (0.027)1/3?
Option 1 : 0.3 Option 2 : 0.03 Option 3 : 0.003 Option 4 : None of these

Ques 94 : Choose the correct answer.
What is the value of (0.016)1/4?
Option 1 : 0.2 Option 2 : 0.02 Option 3 : 0.002 **Option 4 : None of these**

Ques 95 : Choose the correct answer.
Walking 6/7th of his usual speed, a man is 12 minutes too late. The usual time taken by him to cover that distance is:
Option 1 : 1 hour **Option 2 : 1 hr 12min** Option 3 : 1 hr 15 min Option 4 : 1 hr 20 min

Ques 96 : Choose the correct answer.
A boat running upstream takes 8 hours 48 minutes to cover a certain distance, while it takes 4 hours to cover the same distance running downstream. What is the ratio between the speed of the boat and speed of the water current respectively ?
Option 1 : 2 : 1 Option 2 : 3 : 2 **Option 3 : 8 : 3** Option 4 : Cannot be determined Option 5 : None of these

Ques 97 : Choose the correct answer.
In a 100 m race, A can beat B by 25 m and B can beat C by 4 m. In the same race, A can beat C by:
Option 1 : 21 m Option 2 : 26 m **Option 3 : 28 m** Option 4 : 29 m

Ques 98 : Choose the correct answer.
In a family, the father took 1/5 of the cake and he had 4 times as much as others had, then the family members are:
Option 1 : 16 **Option 2 : 17** Option 3 : 18 Option 4 : None of these

Ques 99 : Choose the correct answer.
The price of sugar is increased by 25%. In order not to increase the expenditure a lady must reduce her consumption by:
Option 1 : 25% **Option 2 : 20%** Option 3 : 30% Option 4 : None of these

Ques 100 : Choose the correct answer.
I read 3/8 of a book on one day, and 4/5 of the remainder on another day. If now there were 30 pages unread, the book contains:
Option 1 : 240 pages Option 2 : 230 pages Option 3 : 340 pages Option 4 : 140 pages Option 5 : None of these

Ques 101 : Choose the correct answer.
In an examination, 70% of students passed in physics, 65% in chemistry, 27% failed in both subjects. The percentage of students who passed is:
Option 1 : 66% **Option 2 : 62%** Option 3 : 69% Option 4 : None of these

Ques 102 : Choose the correct answer.
An article was sold for Rs. 2770. Had it been sold for Rs. 3000 there would have been an additional gain of 10%. Cost Price of the article is:
Option 1 : Rs. 2100 Option 2 : Rs. 2200 **Option 3 : Rs. 2300** Option 4 : Rs. 2400 Option 5 : None of these

Ques 103 : Choose the correct answer.
Rakesh buys a scooter worth Rs. 10,000. He sells it to Mohan at a profit of 10%. If after sometime Mohan sells it back to Rakesh at a loss of 10%, then totally:
Option 1 : Rakesh loses Rs. 100 Option 2 : Rakesh loses Rs. 1100 Option 3 : Rakesh gains Rs. 100 **Option 4 : Rakesh gains Rs. 1100** Option 5 : None of these

Ques 104 : Choose the correct answer.
The list price of an electric iron is Rs. 300. If two successive discounts of 15% and 10% are allowed, its selling price will be:
Option 1 : Rs. 229.50 Option 2 : Rs.231.50 Option 3 : Rs.232.50 Option 4 : Rs. 234.50 Option 5 : None of these

Ques 105 : Choose the correct answer.
The rate of compound interest at which a sum of Rs. 8000 amounts to Rs. 8820 in 2 years, is:
Option 1 : 5% Option 2 : 4% Option 3 : 6% Option 4 : 7% Option 5 : None of these

Ques 106 : Choose the correct answer.
A car is 250 metres behind the bus. The car and bus are moving with speed 60 km/hr and 35 km/hr respectively. The car will be ahead of bus by 250 metres in:
Option 1 : 37 seconds Option 2 : 48 seconds **Option 3 : 72 seconds** Option 4 : 68 seconds Option 5 : None of these

Ques 107 : Choose the correct answer.
Mohan walks a certain distance and rides back in 6 hours and 15 minutes. If he walks both ways he takes 7 hours and 45 minutes. If Mohan rides both ways the time which he will take will be:
Option 1 : 4 hours **Option 2 : 19/4** hours Option 3 : 9/2 hours Option 4 : 17/4 hours Option 5 : None of these

Ques 108 : Choose the correct answer.
Population of a village is eight thousand. If 6% men and 10% women are added, population becomes 8,600, then the number of men in the village was:
Option 1 : 4800 **Option 2 : 5000** Option 3 : 5060 Option 4 : 6000

Ques 109 : Choose the correct answer.
If 15 oxen or 20 cows can eat the grass of a field in 80 days, then in how many days will 6 oxen and 2 cows eat the same grass?
Option 1 : 40 Option 2 : 60 Option 3 : 100 **Option 4 : 160**

Ques 110 : Choose the correct answer.
At a certain party the ratio of gents and ladies was 1 : 2. But when 2 gents and 2 ladies left the party, the ratio became 1 : 3. How many people were initially present in the party?
Option 1 : 12 Option 2 : 15 Option 3 : 18 Option 4 : 24

Ques 111 : Choose the correct answer.
Prabodh bought 30 kg of rice at the rate of Rs. 8.50 per kg and 20 kg of rice at the rate of Rs. 9.00 per kg. He mixed the two. At what price (App.) per kg should he sell the mixture in order to get 20% profit?
Option 1 : Rs. 9.50 Option 2 : Rs. 8.50 **Option 3 : Rs. 10.50** Option 4 : Rs. 12.00

Ques 112 : Choose the correct answer.
The cash price of a television is Rs. 4022. A customer paid Rs. 1500 in cash and promised to pay the remaining money in 3 monthly equal instalments at the rate of 5% per annum compound interest. What is the value of each instalment?
Option 1 : Rs. 926.10 Option 2 : Rs. 903.33 Option 3 : Rs. 928.30 Option 4 : Rs. 940.50

Ques 113 : Choose the correct answer.
The population of a village decreases at the rate of 20% per annum. If its population 2 years ago was 10000, what is its present population?
Option 1 : 6000 Option 2 : 10000/144 **Option 3 : 6400** Option 4 : 7600

Ques 114 : Choose the correct answer.
A certain sum of money at simple interest becomes Rs. 1062 in 2 years and Rs. 1183.50 in 3½ years. What is rate of interest per annum?
Option 1 : 7% Option 2 : 6% **Option 3 : 9%** Option 4 : 5%

Ques 115 : Choose the correct answer.
If the simple interest on a sum at 4% per annum for 2 years is Rs. 80, then the compound interest on the same sum for the same period is:
Option 1 : Rs. 86.80 Option 2 : Rs. 86.10 Option 3 : Rs. 88.65 **Option 4 : Rs. 81.60**

Ques 116 : Choose the correct answer.

A man covers a distance of 1200 km in 70 days resting 9 hours a day, if he rests 10 hours a day and walks with speed 1½ times of the previous in how many days will he cover 750 km?
Option 1 : 30 **Option 2 : 31.25** Option 3 : 31 Option 4 : 33

Ques 117 : Choose the correct answer.
A train leaves Delhi at 6.00 a.m. and reaches Agra at 10.00 a.m. Another train leaves Agra at 8.00 a.m. and reaches Delhi at 11.30 a.m. At what time do the two trains cross each other if the distance between Delhi and Agra is 200 km?
Option 1 : 8.45 a.m. **Option 2 : 8.56 a.m.** Option 3 : 9.20 a.m. Option 4 : 9.56 a.m.

Ques 118 : Choose the correct answer.
How many litres of a 90% solution of concentrated acid needs to be mixed with a 75% solution of concentrated acid to get a 30 L solution of 78% concentrated acid?
Option 1 : 24 L Option 2 : 22.5 L **Option 3 : 6 L** Option 4 : 17.5 L

Ques 119 : Choose the correct answer.
If x is a positive number and y = x2, then which of the following is true?
Option 1 : y is always more than x Option 2 : x is always more than y Option 3 : x is always equal to y
Option 4 : None of these

Ques 120 : Choose the correct answer.
Rajiv has a number x in his mind. He finds out that the square of x is less than x. What is the range of x?
Option 1 : x is more than 0 Option 2 : x is less than 1 **Option 3 : x is more than 0, but less than 1** Option 4 : This is not possible

Ques 121 : Choose the correct answer.
What is the value of: x1.5 * x2 ?
Option 1 : x3 **Option 2 : x3.5** Option 3 : x0.75 Option 4 : None of these

Ques 122 : Choose the correct answer.
What is the value of: (33*812*20)/95 ?
Option 1 : 0 **Option 2 : 3** Option 3 : 1/3 Option 4 : None of these

Ques 123 : Choose the correct answer.
What number should be divided by (0.81)1/2 to give the result as 81?
Option 1 : 9 Option 2 : 81 **Option 3 : 72.9** Option 4 : 0.9

Ques 124 : Choose the correct answer.
If 6(x-3) = 36(x-5), then what is the value of x?
Option 1 : 2 Option 2 : No value will agree Option 3 : -1 **Option 4 : 7**

Ques 125 : Choose the correct answer.
Which is the largest among 21/2, 51/3 and 41/4 ?
Option 1 : (2)1/2 **Option 2 : 51/3** Option 3 : 41/4 Option 4 : None of these

Ques 126 : Choose the correct answer.
What is the value of 10009/1004?
Option 1 : 1005 Option 2 : 105 **Option 3 : 1019** Option 4 : None of these

Ques 127 : Choose the correct answer.
In how many different ways can the letters of the word 'OPTICAL' be arranged so that the vowels always come together ?
Option 1 : 120 **Option 2 : 720** Option 3 : 4320 Option 4 : 2160 Option 5 : None of these

Ques 128 : Choose the correct answer.
In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together ?
Option 1 : 810 Option 2 : 1440 Option 3 : 2880 **Option 4 : 50400** Option 5 : 5760

Ques 129 : Choose the correct answer.
How many 3 digit numbers can be formed from the digits 2, 3, 5, 6, 7 and 9, which are divisible by 5 and none of the digits is repeated ?
Option 1 : 5 Option 2 : 10 Option 3 : 15 **Option 4 : 20**

Ques 130 : Choose the correct answer.
A committee is to be formed comprising 7 members such that there is a simple majority of men and at least 1 women. The shortlist consists of 9 men and 6 women. In how many ways can this be done?
Option 1 : 3,724 Option 2 : 3,630 **Option 3 : 4,914** Option 4 : 5,670

Ques 131 : Choose the correct answer.
From a pack of 52 playing cards, 4 cards are removed at random. In how many ways can the 1st place and 3rd place cards be drawn out such that both are black ?
Option 1 : 64,974 Option 2 : 62,252 Option 3 : 69,447 **Option 4 : 1,592,500**

Ques 132 : Choose the correct answer.
In how many ways can the digits 2,3,5,7 and 9 be placed to form a three-digit number so that the higher order digit is always greater than the lower order digits? (Assume digits are all different).
Option 1 : 8 Option 2 : 9 **Option 3 : 10** Option 4 : 15

Ques 133 : Choose the correct answer.
In how many ways can 4 ladies and 4 men form two mixed doubles teams for a tennis match?
Option 1 : 72 Option 2 : 108 Option 3 : 36 Option 4 : 84

Ques 134 : Choose the correct answer.
In CAT entrance examination paper there are 3 sections, each containing 5 questions. A candidate has to solve 5, choosing at least one from each section. The number of ways he can choose is
Option 1 : 2,500 **Option 2 : 2,250** Option 3 : 2,750 Option 4 : 3,250

Ques 135 : Choose the correct answer.
A boy has 4 different boxes and 5 different marbles. In how many ways can he place the marbles in the boxes such that each box has at least one marble ?
Option 1 : 560 **Option 2 : 240** Option 3 : 420 Option 4 : 36

Ques 136 : Choose the correct answer.

A teacher was trying to form the groups of students in such a way that every group has equal number of students and that number should be a prime number. She tried for first 5 prime numbers, but on each occasion exactly one student was left behind. If t
Option 1 : 0 Option 2 : 2 Option 3 : 3 **Option 4 : 4**

Ques 137 : Choose the correct answer.
Ram buys 7 novels from a book fair. Shyam buys 8 novels from the fair, none of which is common with those bought by Ram. They decide to exchange their books one for one. In how many ways can they exchange their books for the first time ?
Option 1 : 7!x8! Option 2 : 7x8! Option 3 : 7!x8 **Option 4 : 56**

Ques 138 : Choose the correct answer.
In an examination 10 questions are to be answered choosing at least 4 from each of part A and part B. If there are 6 questions in part A and 7 in part B, in how many ways can 10 questions be answered ?
Option 1 : 212 **Option 2 : 266** Option 3 : 272 Option 4 : 312

Ques 139 : Choose the correct answer.
A box contains 20 tickets of identical appearance, the tickets being numbered 1, 2, 3, ..., 20. In how many ways can 3 tickets be chosen such that the numbers on the drawn tickets are in arithmetic progression ?
Option 1 : 18 Option 2 : 33 Option 3 : 56 **Option 4 : 90**

Ques 140 : Choose the correct answer.
A company could advertise about its new product in 4 magazines, 3 newspapers and 2 television channels. But in a later move it decided to give advertisements in only 2 of the magazines, one of the newspapers and one the TV channels. In how many ways can
Option 1 : 30 **Option 2 : 36** Option 3 : 44 Option 4 : None of these

Ques 141 : Choose the correct answer.
In how many ways can the letters of the word 'ERGONOMICS' be rearranged such that the vowels always appear together?
Option 1 : 6! /2! Option 2 : 6!*4! Option 3 : 7! /2! **Option 4 : (7! * 4!)/2!**

Ques 142 : Choose the correct answer.
How many different four letter words can be formed (the words need not be meaningful) using the letters of the word PACIFIC such that the first letter is P and the last letter is F?
Option 1 : 8 Option 2 : 3 Option 3 : 6 Option 4 : 7!/5!

Ques 143 : Choose the correct answer.
The value of 74P2 is
Option 1 : 2775 Option 2 : 150 **Option 3 : 5402** Option 4 : none of these

Ques 144 : Choose the correct answer.
In how many different ways can the letters of the word ' HARDWARE' be arranged in such a way that the vowels always come together.

Option 1 : 120 **Option 2 : 1080** Option 3 : 1440 Option 4 : 4320 Option 5 : 720

Ques 145 : Choose the correct answer.
In how many ways a committee, consisting of 4 men and 10 women can be formed from 6 men and 10 women?
Option 1 : 266 Option 2 : 50 **Option 3 : 15** Option 4 : 8640 Option 5 : none of these

Ques 146 : Choose the correct answer.
Out of 7 consonants and four vowels ,how many words of three consonants and 2 vowels can be formed?
Option 1 : 210 Option 2 : 1050 **Option 3 : 25200** Option 4 : 21400 Option 5 : none of these

Ques 147 : Choose the correct answer.
3 books of mathematics and 5 books of physics are placed on a shelf so that the books on the same subject always remain together .The possible arrangements are .
Option 1 : 1440 Option 2 : 1956 Option 3 : 720 Option 4 : none of these

Ques 148 : Choose the correct answer.
The number of possible selections of one or more questions from 8 given questions, each question having an alternative, is
Option 1 : 28-1 **Option 2 : 38-1** Option 3 : 48-1 Option 4 : none of these

Ques 149 : Choose the correct answer.
A five -digit number divisible by 3 is to be formed using numerals 0,1,2,3,4 and 5 without repetition. The total number of ways this can be done is
Option 1 : 216 Option 2 : 240 Option 3 : 600 Option 4 : 3125

Ques 150 : Choose the correct answer.
Let A be containing 10 distinct elements ,then the total number of distinct functions from A to A IS
Option 1 : 10! **Option 2 : 1010** Option 3 : 210 Option 4 : 210-1

Ques 151 : Choose the correct answer.
A polygon has 44 diagonals, the number of its sides is
Option 1 : 10
Option 2 : 11
Option 3 : 12
Option 4 : 22

Ques 152 : Choose the correct answer.
The number of triangles that can be formed by choosing the vertices from a set of 12 points, seven of which lie on the same straight line is
Option 1 : 105

Option 2 : 115
Option 3 : 175
Option 4 : 185

Ques 153 : Choose the correct answer.
There are 5 letters and five addressed envelopes. the number of ways in which all the letters can be put in wrong envelopes is
Option 1 : 119
Option 2 : 44
Option 3 : 59
Option 4 : 40

Ques 154 : Choose the correct answer.
The number of ways in which 8 different flowers can be strung to form a garland so that 4 particular flowers are never separated is
Option 1 : 960
Option 2 : 2880
Option 3 : 288
Option 4 : 576

Ques 155 : Choose the correct answer.
At an election there are five candidates and three members to be elected , and a voter may vote for any number of candidates not greater than the number to be elected. Then the number of ways in which a voter may vote is
Option 1 : 25
Option 2 : 30
Option 3 : 32
Option 4 : none of these

Ques 156 : Choose the correct answer.
There are n different books and p copies of each. the number of ways in which a selection can be made from them is
Option 1 : np
Option 2 : pn
Option 3 : (p+1)n -1
Option 4 : (n+1)p-1

Ques 157 : Choose the correct answer.
The sides AB, BC, CA of a triangle ABC have 3,4 and 5 interior points respectively on them. The total number of triangles that can be constructed by using these points as vertices is
Option 1 : 220
Option 2 : 204
Option 3 : 205
Option 4 : 195

Ques 158 : Choose the correct answer.
A lady gives dinner party to five guests to be selected from 9 friends .The number of ways of forming the party of 5,given that two of the friends will not attend the party together is

Option 1 : 56
Option 2 : 126
Option 3 : 91
Option 4 : none of these

Ques 159 : Choose the correct answer.
Each question has four choices out of which only one is correct. A candidate has to answer four questions. The number of ways he fails to give all answers correctly, is
Option 1 : 15
Option 2 : 81
Option 3 : 255
Option 4 : 256

Ques 160 : Choose the correct answer.
A college has 10 basketball players. A 5-member team and a captain will be selected out of these 10 players. How many different selections can be made?
Option 1 : 1260
Option 2 : 210
Option 3 : 10C6 * 6!
Option 4 : 10C5 * 6

Ques 161 : Choose the correct answer.
There are 10 yes or no questions. How many ways can these be answered?
Option 1 : 1084
Option 2 : 2048
Option 3 : 1024
Option 4 : 100

Ques 162 : Choose the correct answer.
If the letters of the word CHASM are rearranged to form 5 letter words such that none of the word repeat and the results arranged in ascending order as in a dictionary what is the rank of the word CHASM?
Option 1 : 24
Option 2 : 31
Option 3 : 32
Option 4 : 30

Ques 163 : Choose the correct answer.
A bag contains 4 white, 5 red and 6 blue balls. Three balls are drawn at random from the bag. The probability that all of them are red, is:
Option 1 : 1/22
Option 2 : 3/22
Option 3 : 2/91
Option 4 : 2/77

Ques 164 : Choose the correct answer.
A box contains 20 electric bulbs, out of which 4 are defective. Two bulbs are chosen at random from this box. The probability that at least one of these is defective, is:
Option 1 : 4/19

Option 2 : 7/19
Option 3 : 12/19
Option 4 : 21/95

Ques 165 : Choose the correct answer.
In a class, 30% of the students offered English, 20% offered Hindi and 10% offered both. If a student is selected at random, what is the probability that he has offered English or Hindi ?
Option 1 : 2/5
Option 2 : 3/4
Option 3 : 3/5
Option 4 : 3/10

Ques 166 : Choose the correct answer.
A box contains 6 red balls, 7 green balls and 5 blue balls. Each ball is of a different size. The probability that the red ball being selected is the smallest red ball, is
Option 1 : 1/18
Option 2 : 1/3
Option 3 : 1/6
Option 4 : 2/3

Ques 167 : Choose the correct answer.
If A and B are 2 independent events and P(A)=0.5 and P(B) = 0.4, find P(A/B):
Option 1 : 0.5
Option 2 : 0.4
Option 3 : 0.88
Option 4 : None of these

Ques 168 : Choose the correct answer.
A 5-digit number is formed by the digits 1,2,3,4 and 5 without repetition. What is the probability that the number formed is a multiple of 4?
Option 1 : 1/4
Option 2 : 1/5
Option 3 : 2/5
Option 4 : 1/120
Option 5 : 4

Ques 169 : Choose the correct answer.
In a single throw of dice, what is the probability to get a number greater or equal to 4?
Option 1 : 1/3
Option 2 : 2/3
Option 3 : 1/2
Option 4 : None of these

Ques 170 : Choose the correct answer.
A bag contains 5 oranges, 4 bananas and 3 apples. Rohit wants to eat a banana or an apple. He draws a fruit from the bag randomly. What is the probability that he will get a fruit of his choice?
Option 1 : 3.5/12
Option 2 : 7/12

Option 3 : 5/12
Option 4 : None of these

Ques 171 : Choose the correct answer.
There are two boxes A and B. Box A has three red and four blue balls. Box B has five red and two blue balls. Anya draws a ball from each bag randomly. What is the probability that both balls are red?
Option 1 : 4/7
Option 2 : 8/49
Option 3 : 7/8
Option 4 : 15/49

Ques 172 : Choose the correct answer.
Ravi has a bag full of 10 Nestle and 5 Cadbury chocolates. He draws two chocolates. What is the probability that he got at least one Nestle chocolate?
Option 1 : 2/3
Option 2 : 3/7
Option 3 : 2/21
Option 4 : None of these

Ques 173 : Choose the correct answer.
The probability of having at least one tail in 5 throws of a coin is
Option 1 : 1/32
Option 2 : 31/32
Option 3 : 1/5
Option 4 : None of these

Ques 174 : Choose the correct answer.
A bag contains 5 yellow and 4 brown pencils. If two pencils are drawn, what is the probability that the pencils are of the same colour?
Option 1 : 5/108
Option 2 : 1/6
Option 3 : 5/18
Option 4 : 4/9

Ques 175 : Choose the correct answer.
A single letter is drawn at random from the word, “ASPIRATION”, the probability that it is a vowel is?
Option 1 : 1/2
Option 2 : 1/3
Option 3 : 3/5
Option 4 : 2/5

Ques 176 : Choose the correct answer.
The probability that a man can hit a target is 3/4. He tries 5 times. The probability that he will hit the target at least three times is:
Option 1 : 291/364
Option 2 : 371/464
Option 3 : 471/502
Option 4 : 459/512

Ques 177 : Choose the correct answer.
An unbiased dice is rolled 3 times. The probability that the value on the dice is not more than 4 in any of the 3 rolls is:
Option 1 : 8/27
Option 2 : 1/27
Option 3 : 26/27
Option 4 : 2/3

Ques 178 : Choose the correct answer.
Probability of occurrence of event A is 0.5 and that of event B is 0.2. The probability of occurrence of both A and B is 0.1. What is the probability that none of A and B occur?
Option 1 : 0.3
Option 2 : 0.4
Option 3 : 0.7
Option 4 : None of these

Ques 179 : Choose the correct answer.
An unbiased coin is tossed 5 times. If tail appears on first four tosses, then probability of tail appearing on the fifth toss is:
Option 1 : 1/2
Option 2 : 1
Option 3 : 0
Option 4 : 4/5

Ques 180 : Choose the correct answer.
X and Y are two independent events. The probability that X and Y occur is 1/12, and the probability that neither occur is 1/2, the probability of occurrence of X can be:
Option 1 : 1/3
Option 2 : 1/5
Option 3 : 1/2
Option 4 : 1/10

Ques 181 : Choose the correct answer.
An unbiased coin is tossed n times. If the probability of getting 4 tails equals the probability of getting 7 tails, then the probability of getting two tails is:
Option 1 : 55/2048
Option 2 : 3/4096
Option 3 : 1/1024
Option 4 : None of these

Ques 182 : Choose the correct answer.
Sudhanshu and Pankaj stand in a circle with 10 other persons. If the arrangement of the person is at random, then the probability that there are exactly 3 persons between Sudhanshu and Pankaj is?
Option 1 : 9/11
Option 2 : 2/11
Option 3 : 1/11
Option 4 : None of these

Ques 183 : Choose the correct answer.
Three numbers are chosen from 1 to 30 randomly. The probability that they are not consecutive is:
Option 1 : 1/145
Option 2 : 144/145
Option 3 : 139/140
Option 4 : 1/140

Ques 184 : Choose the correct answer.
A bag is full of 20 bananas and no other fruit. Rajeev draws a fruit from the bag. What is the probability that he will draw a banana?
Option 1 : 1
Option 2 : 0
Option 3 : 1/2
Option 4 : None of these

Ques 185 : Choose the correct answer.
An unbiased dice is rolled 5 times and the outcomes are 1, 2, 3, 4 and 5 respectively. If it is rolled again, what is the probability that the outcome is 6?
Option 1 : 1
Option 2 : 5/6
Option 3 : 1/6
Option 4 : None of these

Ques 186 : Choose the correct answer.
The probability of drawing an apple from a bag of fruits is 6/25. How many apples should Ravi draw, so that there is a chance he will draw 12 apples on average?
Option 1 : 25
Option 2 : 50
Option 3 : 12
Option 4 : None of these

Ques 587 : Choose the correct answer.
What is the probability for a day to be Sunday?
Option 1 : 1/7
Option 2 : 1/5
Option 3 : 52/365
Option 4 : None of these

Ques 588 : Choose the correct answer.
Rani has a bag with three blue and three yellow coins. She takes out a coin, sees its colour and puts it back in the bag. She does this thrice. What is the probability that she saw all blue coins.
Option 1 : 1/8
Option 2 : 1/2
Option 3 : 1/3
Option 4 : None of these

Ques 589 : Choose the correct answer.

Shikhar has a bag with 2 balls, each of which can be black or white with equal probability. Now, he draws out a ball and it turns out to be black. After this event, what is the probability that both balls are black?
Option 1 : 1/2
Option 2 : 1/4
Option 3 : 1
Option 4 : None of these

Ques 590 : Choose the correct answer.
A coin is tossed thrice. What is the probability that the first toss of coin lands head, second tail and third lands tail as well?
Option 1 : 1/16
Option 2 : 3/8
Option 3 : 1/8
Option 4 : None of these

Ques 591 : Choose the correct answer.
The probability of occurrence of event A is 0.3 and that of event B is 0.4. The events are independent. What is the probability of occurrence of both A and B?
Option 1 : 0.7
Option 2 : 0.1
Option 3 : 0.12
Option 4 : Cannot be determined

Ques 592 : Choose the correct answer.
The probability of occurrence of event A is 0.1 and that of event B is 0.2. The events are mutually exclusive. What is the probability of occurrence of both A and B?
Option 1 : 0.1
Option 2 : 0
Option 3 : 1
Option 4 : Cannot be determined

Ques 593 : Choose the correct answer.
The probability of occurrence of event X is 0.8 and that of event Y is 0.05. The events are mutually exclusive. What is the probability of occurrence of either X or Y?
Option 1 : 0.85
Option 2 : 0.75
Option 3 : 0
Option 4 : Cannot be determined

Ques 594 : Choose the correct answer.
10% of the voters did not cast their vote in an election between two candidates. 10% of the votes polled were found invalid. The successful candidate got 54% of the valid votes and won by a majority of 1620 votes. The number of voters enrolled on the vo
Option 1 : 25000
Option 2 : 33000
Option 3 : 35000
Option 4 : 40000

Ques 595 : Choose the correct answer.
A, B, C started a business with their investments in the ratio 1:3:5. After 4 months, A invested the same amount as before and B as well as C withdrew half of their investments. The ratio of their profits at the end of the year is:
Option 1 : 4:3:5
Option 2 : 5:6:10
Option 3 : 6:5:10
Option 4 : 10:5:6

Ques 596 : Choose the correct answer.
Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1:1:2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be:
Option 1 : Rs. 169.50
Option 2 : Rs. 170
Option 3 : Rs. 175.50
Option 4 : Rs. 180

Ques 597 : Choose the correct answer.
A can contains a mixture of two liquids A and B in the ratio 7:5. When 9 litres of mixture are drawn off and the can is filled with B, the ratio of A and B becomes 7:9. How many litres of liquid A was contained by the can initially ?
Option 1 : 10
Option 2 : 20
Option 3 : 21
Option 4 : 25

Ques 598 : Choose the correct answer.
A man bought a number of clips at 3 for a rupee and an equal number at 2 for a rupee. At what price per dozen should he sell them to make a profit of 20% ?
Option 1 : Rs 4
Option 2 : Rs 5
Option 3 : Rs 6
Option 4 : Rs 7

Ques 599 : Choose the correct answer.
Padam purchased 30 kg of rice at the rate of 17.50 per kg and another 30 kg rice at a certain rate. He mixed the two and sold the entire quantity at the rate of Rs. 18.60 per kg and made 20% overall profit. At what price per kg did he purchase the lot
Option 1 : Rs.12.50
Option 2 : Rs. 13.50
Option 3 : Rs. 14.50
Option 4 : Rs. 15.50
Option 5 : None of these

Ques 600 : Choose the correct answer.
The manufacturer of a certain item can sell all he can produce at the selling price of Rs. 60 each. It costs him Rs. 40 in materials and labour to produce each item and he has overhead expenses of Rs. 3000 per week in order to operate the plant. The numb

Option 1 : 200
Option 2 : 250
Option 3 : 300
Option 4 : 400

Ques 601 : Choose the correct answer.
A sells a bicycle to B at a profit of 20%. B sells it to C at a profit of 25%. If C pays Rs. 225 for it, the cost price of the bicycle for A is:
Option 1 : Rs. 110
Option 2 : Rs.120
Option 3 : Rs. 125
Option 4 : Rs. 150

Ques 602 : Choose the correct answer.
If 5% more is gained by selling an article for Rs. 350 than by selling it for Rs. 340, the cost of the article is:
Option 1 : Rs. 50
Option 2 : Rs. 160
Option 3 : Rs. 200
Option 4 : Rs. 225

Ques 603 : Choose the correct answer.
Consider the following statements : If a sum of money is lent at simple interest, then the
1. Money gets doubled in 5 years if the rate of interest is 50/3 %.
2. Money gets doubled in 5 years if the rate of interest is 20%.
3. Money becomes
Option 1 : 1 and 3 are correct
Option 2 : 2 alone is correct
Option 3 : 3 alone is correct
Option 4 : 2 and 3 are correct

Ques 604 : Choose the correct answer.
The difference between simple interest and compound interest on Rs.1200 for one year at 10% per annum reckoned half-yearly is:
Option 1 : Rs. 2.50
Option 2 : Rs. 3
Option 3 : Rs. 3.75
Option 4 : Rs. 4
Option 5 : None of these

Ques 605 : Choose the correct answer.
A sum of money lent at compound interest for 2 years at 20% per annum would fetch Rs. 482 more, if the interest was payable half-yearly than if it was payable annually. The sum is:
Option 1 : Rs. 10,000
Option 2 : Rs. 20,000
Option 3 : Rs. 40,000
Option 4 : Rs. 50,000

Ques 606 : Choose the correct answer.

The simple interest on Rs. 10 for 4 months at the rate of 3 paise per rupee per month is:
Option 1 : Rs. 1.20
Option 2 : Rs. 1.60
Option 3 : Rs. 2.40
Option 4 : Rs. 3.60

Ques 607 : Choose the correct answer.
If the compound interest on a sum for 2 years at 25/2 % per annum is Rs. 510, the simple interest on the same sum at the same rate for the same period of time is:
Option 1 : Rs. 400
Option 2 : Rs. 450
Option 3 : Rs. 460
Option 4 : Rs. 480