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?

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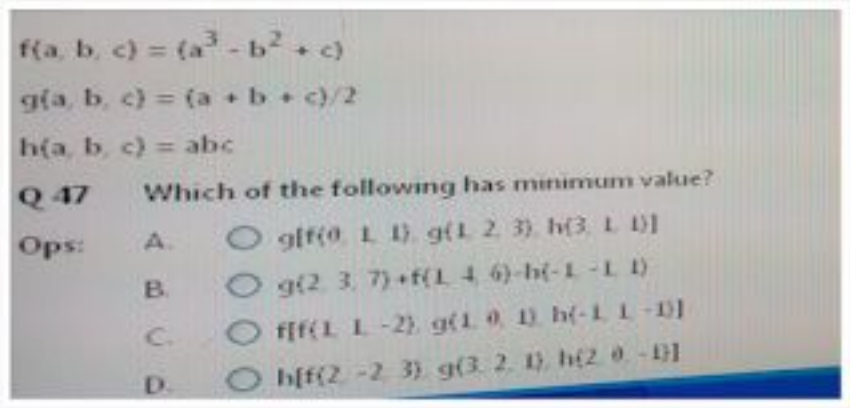
Ans: D

Verify from options



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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.

(Image taken while taking Cocubes Test)

1. 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?

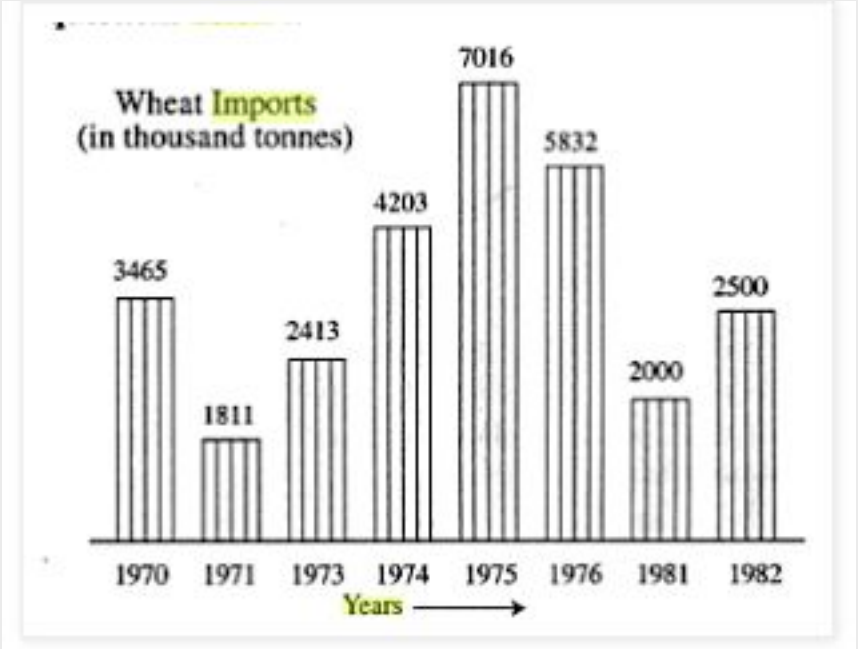
27. two trains for Palwal leave Kanpur at 10a.m and 10:30 am and travel at the speeds of 60 kmph and 75 kmph respectively. After how many kilometres from Kanpur will the two trains be together?
Ans: 150 km
28. (x + 1/x) = 6 the value of (x5 + 1/x5) = ?
Ans: 6726
29. In how many ways can 44 people be 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.

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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

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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 √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
√ (a2 + b2) = √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 √(a/b)+ √(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

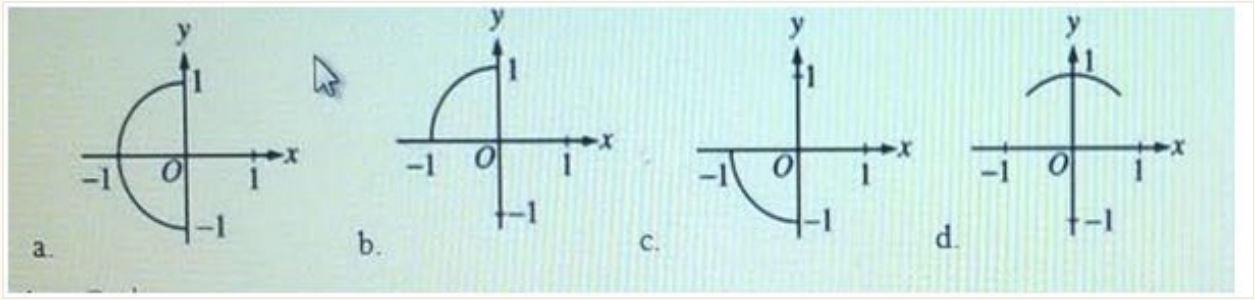
71. If 28 Men working 6 hours a day can finish a work in 15 days. In how many days can 21 men working 8 hours per day will finish the same work?
a. 24 days b. 21 days c. 18 days d. 15 days
Ans: 15 days
Work = 28 * 6 * 15 --- (1)
Work = 21 * 8 * x -- - (2)
Equating (1) and (2)
28 * 6 * 15 = 21 * 8 * x
X= 15

72. A train is running at the rate of 60 kmph. A man is also going in the same direction on a track parallel to the rails at a speed of 45 kmph. If the train crosses man in 48 seconds, the length of the train is?
a. 50m b. 150m c. 100m d. 200m
Ans: 200 m
Speed = distance/time;
Distance= speed * time
= (60-45) * 48 * (5/18) (relative speed in same direction is s1-s2 and kmph to m/sec 5/18)
= 200m

73. Find the last two digits of the expansion (212n-64n) when n is a positive integer?
a. 5 b. 11 c. 10 d. 00
Ans: 00
Assume n=1
Then answer is 00

74. Read the information given below and answer the questions that follow
(a$b) = (a+b)/2
(a&b) = (a2-b2)
(a?b)=(a-b)/2
What is the value of [(22$4)&(25?15)]?
a. 154 b. 144 c. 112 d. 125

Ans: 144
75. Which of the following graph indicates the graph of {(sin t, cos t):- $\pi/2 \leq t \leq 0$} in xy-plane?



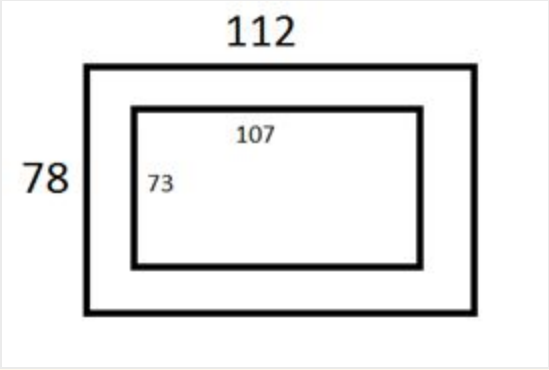
a. D b. C c. B d. A
Ans: B
When t = -90 then (sin t, cos t) = (-1,0)

When t=0 then (sin t, cos t) = (0,1)
Plot above two points in x-y plane.
Answer: Option (C)

Ans: B
When t = -90 then (sin t, cos t) = (-1,0)
When t=0 then (sin t, cos t) = (0,1)
Plot above two points in x-y plane.
Answer: Option (C)

76. There are 4 boys and 3 girls. They sit in a row randomly, what is the probability that all the girls are together?
a. 1/14 b. 3/14 c. 2/14 d. 5/14
Ans: 2/14
Probablity = (favourable cases / total cases)
Favourable cases = girls together.
= 4 boys + 1 (assume 3 girls as 1) = 5! * 3! (girls can be arranged in 3! Ways)
Total cases = 7!
So probability= (5! * 3!)/7! = 1/7

77. The simple interest on Rs. 4,500 for 4 years at 15% p.a is:
a. Rs. 2700 b.Rs. 2500 c. Rs. 2300 d. Rs. 3000
Ans: 2700
Simple interest = (P * T * R)/ 100
Ans: 2700



78. A rectangular grassy plot is 112 m by 78 m. It has a gravel path 2.5 m m wide all around it on the inside. Find the area of the path

a. 952 m2 b. 926 m2 c. 912 m2 d.950 m2

Ans: 925 m2

This question is very very important

Area of the path = (112*78) – (73 * 107) = 925m2

79. A cone of height 21 cm has a volume of 2200 cm3. Determine the base radius of the cone

a. 2.5 cm b. 10 cm c. 7.5 cm d. 5 cm

Ans: 10 cm

Volume of cone = (1/3) Pi * r2 * h = 2200

r=10 cm

80. what is the radius of the circular plate of thickness 1cm made by melting a sphere of radius 3cm?

A. 6 cm B. 5 cm C . 4 cm D.7 cm

Ans: 6 cm

Volume of a sphere = (4/3) * pi * r3 --(1) (here r =3cm)

Volume of circular plate of thickness 1 cm is = pi * r2 * h -- (2) (here h=1cm that is thickness)

Equating (1) and (2)

r=6cm

81.what is the ratio of the surface area formed by placing 3 cubes adjacent to the sum of the individual surface area of these 3 cubes?

A.7:9 B.27:23 C.49:81 D.9:7

ANS: Volume of a cube = 6a2

Volume of 3 cubes = 18a2

Volume of three cubes placing adjacent each other = 6a2+5a2+5a2= 16a2

Ratio= 16/18 = 8:9

82.At what rate percent CI does a sum of money become nine fold in 2 years?

a.100% p.a b.300% p.a c.400% p.a d.200% p.a

Ans: . P(1+(r/100))2 = 9P

r=200%

83.x,y,z rent an area for Rs.10,000 per annum.X puts 312 horses in the area for 4 months,y puts 124 horses in the area for 2 months and puts 520 horses for 6 months.what % of the total question should y pay?

a.27.03% b.67.59% c.5.37% d.16.7%

Solution: rent for an year =10,000

rent for a month=10,000/2=833

for 2 months =(1665/10,000)*100=16.7%

84.the SI on a sum of Rs.12,000 at a rate of 15% p.a is Rs.5,400.determine the time for which the sum is borrowed,
a.2 years b.3 years c.1.5 years d.2.5 years
Solution: SI=PTR/100
5400=(1200*15*T)/100
T=3
85.In a single throw of a fair dice,what is the probability that the no appearing on the top face of the dice is more than than 2?
a.1/3 b.3/4 c.2/3 d.1/2
Ans: here,probability more than that the no is more than 2 is 4.
so, we know that the formula..p(x)=no.of favourable cases/no. of outcomes
so,it is 4/6=2/3 option C.

86.if x=12 , y=4, then find the values of (x+y)x/y
a. 8009 b.4096 c.none d.1024
Ans:Here,12+4 is 16 and it is written as 2 power4 ,then 12/4 is 3,so now it is 2 power 12 so ans is 4096.

87.The salary of ramu is 3 times the salary of raju's salary increases by 20% every month &ramu's salary decreases by 10% every month,what is the ratio of salary of raju to ramu after 2 months?
a.15:24 b.17:28 c.14:23 d.16:27
Ans: let salary of raju is P
Then ramu's salary is 3P
After 2 months raju's salary becomes P(1+20/100)2 -- (1)
After 2 months ramu's salary becomes 3P(1+20/100)2 --(2)
Ratio= (1)/(2) = 16:27

88.There are 2 vessels which are filled with milk of 2 qualities worth Rs.10 per litre and Rs.11 per litre.In what approximation ratio these two be mixed to get a new quality of milk of worth Rs.10.67 per litre?
a.12:3 b.1:3 c.1:2 d.2:1
ans:1:2
(10*1+11*2)/1+2=10.66666(approx 10.67) by option verification.

89. A sum of Rs.5000 was divided among P, Q and R in the ratio of 2:3:5. If the amount of Rs 500 was added to each, what will be their new ratio?
Options: a) 3:4:6 b) 3:5:4 c) 3:4:5 d) 2:3:4
Divide 5000 in the ratio of 2:3:5 then 1000, 1500, 2500
Add 500 to 1000, 1500 and 2500 then 1500: 2000: 3000
3:4:6

90. There are two vessels which are filled with milk of two qualities worth Rs10 per liter and Rs 11 per liter. In what approximate ratio, these two be mixed to get a new quality of milk of worth Rs 10.67 per liter?
Options: a) 1:3 b) 1:2 c) 2:3 d) 2:1
Ans: 10 * x + 11 * y = (x+y) * 10.67 (Assume x & y quantity in vessels 1 & 2 respectively)
Solve for x/y = 1:2

91. The retail price of a toothpaste of 140 grams is Rs 40, the shopkeeper gives a toothbrush whose actual price is Rs 10, free with it and still gains 25% . The cost price of the toothpaste is :
Options: a) Rs.36 b) Rs.24 c) Rs. 30 d) none of the mentioned options.
Ans: Selling price = 40 – 10 = 30 Rupees.
Let cost price =x;
Selling price = cost price + profit on cost price
30 = x + 25% of x;
X= 24

92. 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?
Options: a) 226.61 cm^3 b) 223.73cm^3 c) 228.73cm^3
Answer is 326.61 cm3

93. 5 boys and 5 girls were made to sit around a round table alternatively. How many of such arrangements are possible?
Options: a) 14400 b) 7200 c) 28800 d) 1152
Ans: In general, the number of ways of arranging n objects around a round table is (n-1)!
Arranging girls is 4! Then arranging boys is 5! So total is 2880

94. Determine the speed of a train of length 240 meters if it crosses a pole in 15 seconds.
Options: a) 44.4 kmph b) 57.6 kmph c) 33.3 kmph d) 22.2 kmph
speed = distance/ time
Ans: 57.6

95. For p= 5 and q= -5, the value of (9p^2+36pq+36q^2) is:
Options: a) 900 b) 15 c) 30 d) 225
Ans: (3p + 6q)2
Ans: 225

96. For all integral values of n, the expression ((7^2n)-(3^3n)) is a multiple of:
Options: a) 10 b) 31 c) 12 d)22
Ans: take n=1 then verify options
Ans: 10

97. A sum of money at CI amounts to thrice itself in three years. In how many years will it be 9 times itself?
Options: a) 6years b) 2 years c)5 years d) 3 years
Ans: P(1+r/100)3= 3P
So (1+r/100)3=3
To become 9 times squaring on both sides
(1+r/100)6 = 9
So 6 years

98. A 3 digit number is formed with the digits 1,3,6,4 and 5 at random with no digits being repeated in the same number. What is the chance that the number formed is divisible by 2?

Options: a) 4/5 b)3/5 c)2/5 d)1/5
Ans: Total cases = 5*4 * 3 = 60

_ _ _
3rd digit should be filled either by 6 or 4 so two ways
First place is filled with 4 ways as we have used one digit in 3rd place
Second digit is filled with 3 ways.
So favourable cases = 2 * 4 * 3= 24

Probability = 24/60

99.

TOTAL SALES IN 2013 = Rs. 500 lakhs
TOTAL SALES IN 2014 =Rs. 600 lakhs.
100. What is the difference in revenue earned by stumps in two years?
Options: a) 16 lakhs b) 10 lakhs c) 14 lakhs d) 12 lakhs
Ans: 14 lakhs
101. The revenue earned by pads in the year 2013 is what percent of the revenue earned by gloves in the year 2014? Options: a) 83.3% b) 58.5% c) 43.3% d) 72.5%
Ans: 83.3%
102. What is difference between the revenue earned by pads in 2014 and revenue earned by balls in 2013?

Ans: 7 lakhs

103. W and Z throw one dice for a stake of Rs.40, which is to be won by the player who first throws a one. The game ends when the stake is won by W or Z if W has the first throw, what are the chances that the stake is won by Z?
a.5/11 b.1/2 c.1/3 d.5/12

Adminstrator-signed Rules by Regulatory Stages,2005-2010

104. What is the average of NPRM, Direct Final, and Final rules in 2008?

a.52.33 b.45.33 c.54.33 d.40.33
Ans: 45.33
105. What is the ratio of 2006 NPRM to 2005 Final Rules?
a.none of the mentioned options b.79:41 c.71:49 d.49:71
Ans: 71.49
106. what is the average of 2005,2008 and 2010 for all stages?
a.38.33 b.39.46 c.52.57 d.none of the mentioned options

107. Six different objects were divided among 4 people. In how many ways it can be done, if there is no restriction on minimum number of objects that each person can get?
a.23 b.72 c.64 d.84
Ans: (6+4-1)c (4-1) = 9C3 = 84

108. A Rectangular hall 12m long and 10m broad is surrounded by a verandah, 2m wide. Find the area of the verandah. a. 105m2 b. 104m2 c. 89m2 d. 123m2

Ans: Similar to Q.no 78 : (16*14) – (10*12) = 104

109. Two circular cylinders of equal volume have heights in the ratio of 1:2. Ratio of their radii is:
a. 1.414:1 b. None of the mentioned Options c.1.69:1 d.1.732:1
Ans: 1.414 : 1

110. If s(s+s1+s2)=9,s1(s+s1+s2)=16 and s2(s+s1+s2)= 144, then the what is the value of “s”?
a.7/11 b.1/11 c.11/13 d.9/13
Ans: Let s+s1+s2 =x;
Then s(x)=9 --(1)
S1(x)=16 -- (2)
S2(x)=144 –(3)
Add above three equations s(x)+S1(x)+S2(x)=9+16+144
x(s+s1+s2) = 169
x2=169
x=13
substitute x value in equation(1) so s=9/13

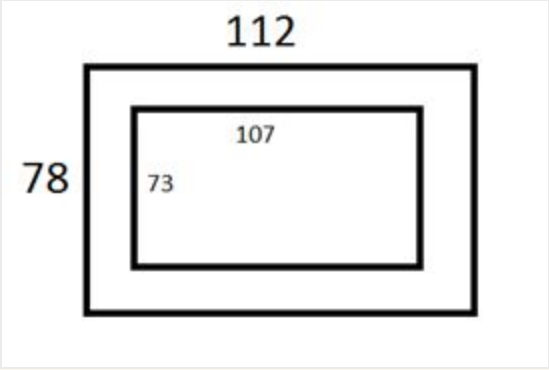
111. Atul sold two mobiles for Rs.9900 each. At one mobile, he gained 10% and on other he lost 10%. Find his gain or loss in transaction. a.Loss 1% b.Neither loss Nor gain c.Gain 1% d.none of the mentioned options
Ans: When a person sells two similar items, one at a gain of say x%, and the other at a loss of x%, then the seller always incurs a loss given by:
Loss % = X*X/100
Ans: Loss 1%

112. three pipes can fill the tank in 18 hours. One of the pipes can fill it in 18 hrs and the other pipe can empty in 9 hours. At what rate does the third pipe work?
a. Waste pipe emptying the tank in 18 hours b. Filling the tank in 9 hours
c. Filling the tank in 18 hours d. Waste pipe emptying the tank in 9 hours
1/18 = 1/18 – 1/9 +x
X=1/9
Ans: Filling the tank in 9 hours

113. A rectangular grassy plot is 112m by 78m.It has a gravel path 2.5m wide all around it on the inside. Find the cost of constructing it at Rs. 2 per m2.

a. Rs. 2,300 b. Rs. 1,567 c. Rs. 1,850 d. Rs. 2,355
Similar Q.no 78.

This question is very very important



Area of the path = (112*78) – (73 * 107) = 925m2
Cost= 925 *2 = 1850

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

115. A Shopkeeper allow a discount of 20% on the marked price but charges 5% sales tax on the marked price and 5% service tax on the discounted price. If the customer pays Rs. 2670 as price including tax, then what is marked price of the item?
a.3245
let x be the marked price
x – 20% of x + 5% of sales tax + 5% of (x – 20% of x) = 2670
x=3000

116. There are 4 boys and 3 girls. They sit in a row randomly what is the probability that all girls are together?
A. 1/14 B. 3/14 C. 2/14 D. 5/14
see solution for Q.no 76 (ans : 2/14)
117. The simple interest on Rs.4,500 for 4 years at 15% p.a. is:
A. Rs. 2700 B. Rs. 2500 C. Rs. 2300 D. 3000
Ans: 2700
118. A rectangular grassy plot is 112 m by 78 m. It has a gravel path 2.5m wide all round it on the inside. Find the area of the path A. 925 m2 B. 926 m2 C. 912 m2 D. 950 m2
Ans: Q.no 78 (Ans: 925)

119. A cone o height 21cm has a volume of 2200 cm3.Determine the base radius of the cone.
A. 2.5 cm B. 10 cm C. 7.5 cm D. 5 cm
1/3 * Pi * r2 * h = 2200
r=10

120. 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, 0.2 respectively.If John Wright is appointed then probability of Ganguly appointed as a captain will be 0.7 and the corresponding probability if Greg Chappell or Gary Kristen is appointed are 0.6 or 0.5 respectively. Find the overall probability that Ganguly will be appointed as a captain? A. 0.18 B. 0.35 C. 0.63
D. 0.89

Ans: 0.5 * 0.7 + 0.3 * 0.6 + 0.2 * 0.5 = 0.63

121. Study the following data carefully and answer the question that follows.
A%B = (A+B)2
A#B = (A2-B2)
A?B = (A-B)2
Question: Find the value of 5?(6%2)

A. -3481 B. 59 C. 3481 D. -59

123. what is the difference in revenue earned by stumps in two years?
A . 12 lakhs B . 14 lakhs c. 16 lakhs d. 10 lakhs

124. the revenue earned by pads in the year 2013 is what percent of the revenue earned by gloves in the year 2014?
A. 58% B. 83% c.43.3% D.72.2%

125. what is the difference between the revenue earned by pads in 2014 qnd revenue earned by balls in 2013?
A.3 lakhs B. 7 lakhs C. 5 lakhs D. 1 lakh

126. what will be unit's digit in the result of the expression 365 * 653 *95 ?
A. 6 B. 2 C.3 D.7
Ans: 2

127. if x and y throw a pair of dice alternately .x wins if the throws 4 before y throws 5 and y wins. If she throws 5 before x throws 4. Find y's chance of winning if x makes the first throw
A.1/3 B.1/2 C.5/11 D.5/12

128. A train 1200m long crosses a platform in 1.5 min at a speed of 54 kmph . what is the length of the platform?
A.150m B.120m C.175m D.100m
Ans: A

129. a cow gives 4 liters of milk daily ,but this is only (1/3)rd of what a herd of cows gives daily.if 24 liters of milk is collected in 2 days ,the number of cows in the herd is
A. 6 B. none of the mentioned options C. 3 D. 2
Ans: 3

130. if (x+1/X) = 6, the value of (X5+1/x5) is
A.7302 B. 5473 C. 6726
Ans: . Shortcut : let (x+1/x) = a
Then (x5+1/x5) = a5-5a3+5a
So answer : 6726

131. two trains of the same length but with different speeds pass a static pole in 4 sec and 5 sec respectively. In what time will they cross each other .when they are moving in the same direction?
A.3.22 sec B. 4.98 sec C. 4.44 sec D. 4.22 sec
Ans: Same direction : relative speed is s1-s2
Opposite Direction: relative speed is : s1+s2
S1= l/4
S2=l/5
Same direction: time= distance/speed
=2l/s1-s2;
Substitute s1 and s2 values in above equation, we get 40 seconds
But no option contains this answer.
Assuming that given question is for opposite direction then we get answer as 4.44 sec.
So choose 4.44 seconds as answer

132. A person covers a distance in 40 min .if he runs at a speed 45 kmph on a average . find the speed at which he must run to reduce the time of journey to 30 min
A. 40 kmph B. 30 kmph C. 50 kmph D. 60 kmph
Ans: 40 * 45 = 30 * x;
Find x value .
Ans: 60

133. a sum of RS. 5000 was divided among P,Q and R in the ratio 2:3:5. If the amount of RS.500 was added to each ,what will be their new ratio ?
A. 3:4:6 B. 3:5:4 C. 3:4:5 D. 2:3:4
Ans: Divide 5000 in the ratio of 2:3:5 then 1000, 1500, 2500
Add 500 to 1000, 1500 and 2500 then 1500: 2000: 3000
3:4:6

134. there are two vessels which are filled with milk of two quantities worth RS.10 per litre and RS. 11 per litre .in what approximate ratio these two be mixed to get a new quality of milk of worth RS.10.6 litre?
A. 1:3 B. 1:2 C. 2:3 D. 2:1
Ans: 10 * x + 11 * y = (x+y) * 10.6 (Assume x & y quantity in vessels 1 & 2 respectively)
Solve for x/y = 2:3

135. A man walking with a speed of 5kmph reaches his target 5min late. If he walks at a speed of 6kmph, he reaches on time. Find the distance of the target from this house.
2.5km 3km 1.5km 4km
Ans: distance= 5 * (t+5/60)
Distance = 6* t
Equate above two equations
t=5/12
distance = 6*(5/12) = 2.5 km

136. If m=3-2 , then the value of -(1/) is:
1 2 2 -1
Ans: . -(1/) = x
Squaring on both sides
m+1/m-2=x2
so x=2

137. If radius of circle is increased by 5% then the percentage increase in its area is:
8.25% 10.25% 25% 9.32%
Ans: let's original radius is 100
Then new radius is 105
Original area= Pi*100*100 = x
New area is = Pi*105*105 = y
%increase= ((y-x)/x)*100
Ans= 10.25

138. What is the total number of ways of selecting at least one object from 2 sets of 10 distinctly different objects?
220-1 100 (210-1)2 120

139. Read the info given below and answer the question that follow:
(a$b)=(a+b)/2
(a&b)=(a2-b2)
(a?b)=(a-b)/2

What will be the value of((a$b)/(a&b))2-(a$b)(a?b) at a =4 and b=6?
95/16 65/16 31/16 81/16
Ans: 81/16

140. Determine the speed of train of length 180cm if it crosses a pole in 5 sec.
190kmph 135.8kmph 129.6kmph 150.5kmph
Ans: 129.6 kmph

141. A certain number of men can do a work in 75days. If there were 6more men, it could be completed in 15 days less. How many men were there in the beginning?
30 men 27 men 24 men 21 men
Ans: x * 75 =(x+6) * 60
Find x.

Ans= 24

142. The break up of energy consumption in various parts of a building, for the years 1990 and 2000 , is given in the pie charts below. Study the pie-charts carefully and answer the following questions :

143. Between 1990 and 2000 , what was the increase in energy use for the PC Room, Meeting Rooms space combined?
188 kWh 50 kWh Cant be determined 184 kWh
Ans: 50 KWH
144. If the total energy usage today is 6% lower than it was in 2000, by how much has today's usage reduced when compared to 1990? 0.178 0.171 Cant be determined 0.829
Ans: 0.171
145. Which space experienced the smallest change in energy use between 1990 an 2000?
Meeting Rooms PC Room Print Room Kitchen
Ans: Meeting rooms
146. 3 individuals john wright, greg chappell and gary kristen are in the race for the appointment of new coach of team india. The probablities 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 probablity 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
147. we know that p/q=r/s multiplies p/r=q/s.this property is known as:
a.componendo b.dividendo c.alterendo d.none of these

148. a polygon has 77 diagonals.Determine the number of sides.
a.15 b.12 c.17 d.14
Ans:

149. if(m^4+m^-4)=47,then determine the value of (m+m^-1).
a.3 b.1 c.-1 d.0
Ans: 3
150. P lends Rs 3000 to Q and certain sum to R at 5% P.a Simple Interest. If after 4 years P altogether receives Rs 1200 as interest from Q and R then what was the sum lent to R?
a. 750 b. 1000 c. 500 d. 240
Ans:
151. The direct distance between City A and City B is 300 miles. The direct distance between city B and City C is 400 miles. What could be the direct distance between city C and City A?
a. Between 100 and 700 b. Less than 100 c. More than 900 d. More than 700
Ans: . There are two possibilities with the given data.

So answer is : a. Between 100 and 700

152. If the curved surface area of a cone is twice that of another cone and slant height of the second cone is twice that of the first. Find the ratio of the area of their bases.
a. 2:3 b. 1:4 c. 4:1 d. 16:1
Ans: Curved surface area of a cone = Pi * r * l;
2/1=(r1*1)/ (r2 * 2) so r1/r2 = 4/1
Answer: 4:1

153. What is the least number which when divided by 3,8,11,21 and 27 leaves a remainder of 5 in each case
a. 149688 b. 16637 c. 125466 d. 1253
Lcm of (3,8,11,21,27) = 16632
Add 5 to 16632 = 16637

154. (x4+1/x4) = 14 then (x-1/x)2 is
a. -2 b. 2 c. 4 d.-4
Ans: 2
155. A cone of slant height 20 cm has a curved surface area of 880 cm2. Determine the base radius of the cone.
Curved surface area of a cone = Pi * r * l;
880= (22/7) * r * 20
So r = 14

156. The ratio of three numbers is 4:5:6 and sum of their squares is 7700. What is the sum of the numbers.
a. 100 b. 90 c. 120 d. 150
let the numbers be 4k,5k,6k

Sum of their squares is 7700
16k2 + 25k2 +36k2 =7700
K=10
Sum of their numbers= 4k+5k+6k = 15k = 150
Ans: 150

157. Two cone have their heights in the ratio 2:1 and their base radius in the ratio 1:4 . what will be their volumes ratio?
a. 2:1 b. 3:2 c. 2:3 d. 1:2
cone volume = (1/3) * Pi * r * r * h
So volumes ratio = 1:8

158. if m=2-√3 then (m6+m4+ m2+1)/m3 is
Apply denominator to individual terms then give equation becomes
m3+m+1/m+ 1/m3
1/m= 2+√3
Ans: 56

159. Anitha has 3 novels and 4 dictionaries. Determine the number of ways in which all 7 books can be arranged on the shelf so that the books of the same kind must be kept together.
a. 2120 b. 288 c. 144 d. 5040
Assume 3 novels as object-A and 4 dictionaries as object-B
Now keeping together means...
We can arrange A and B in two ways
A contains 3 novels, we can arrange 3! Ways internally
B contains 4 Dictionaries, we can arrange 4! Ways internally
So total= 2*3! * 4! = 288 ways

160. A container contains a mixture having orange juice, pine apple juice and water in the ratio ½ : 1/3: 1/5. What is the approximate percentage of pine apple in the container?
a. 20% b. 32% c. 30% d. 36%
Ans: lcm of (2,3,5) = 30
Multiply ratios with 30
15: 10: 6

Pipeapple percentage = (6/31) * 100 = 20%

161. Read the information given below and answer the questions that follow.

X%y= (y2-x3)
X&y=(x2-y3)+(x%y)
f(a)=(a2+a3)

what is the value of ((x%y) – (x&y)) (x%y)-1 where x=2, y=1 ?