100+ MIXED QUANTITATIVE APTITUDE QUESTIONS

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1. A boat takes 90 minutes less to travel 36 km downstream than to travel the same distance upstream. If the speed of the boat in still water is 10 km/h, the speed of the stream is:
   A) 3km/hr
   B) 1.5km/hr
   C) 2km/hr
   D) 4km/hr
   E) None

View Answer

Option C
Solution:
Let the speed of the stream x km/hr.
Then downstream =(10+x)
Upstream =(10-x)
36/(10-x) – 36/(10+x) =90/60
72x *60=90(100-x^2)
x^2+48x-100=0
x=2km/hr.

2. In an exam out of 1800 students, 65% boys and 80% girls are passed. If total pass percentage was 75% , how many girls appeared in the exam and how many girls failed?
   A) 1350, 360
   B) 1200, 240
   C) 1000, 180
   D) 1050, 280
   E) None

View Answer

Option B
Solution:
B65 ……G80
. 75
5 ……..10
Ratio 1:2.
Number of Girls 1800*2/3=1200.
Then No of girls failed=1200*20/100=240.

3. The average temperature for Wednesday, Thursday and Friday was 42 Deg c. The average for Thursday, Friday and Saturday was 43 Deg c. If temperature on Saturday was 44 Deg c, what was the temperature on Wednesday?
   A) 47 Deg c
   B) 43 Deg c
   C) 45 Deg c
   D) 41 Deg c

E) None

View Answer

Option D
Solution:
Average temperature for Wednesday, Thursday and Friday = 42 Deg c
Total temperature = 3*42 = 126 Deg c
Average temperature for Thursday, Friday and Saturday = 43 Deg c
Total temperature = 43*3 = 129 Deg c
Temperature on Saturday = 44 Deg c
Now ,
(Thursday + Friday + Saturday) – (Wednesday + Thursday + Friday) = 129-126
Saturday – Wednesday = 3
Wednesday = 44-3 = 41 Deg c.

4. Find the average of first 85 natural numbers.
A) 43
B) 50
C) 48
D) 53
E) None

View Answer

Option A
Solution:
Average of 1st n natural number is given by = ([n*(n+1)]/2)/n
Average of 1st 85 natural number is given by
{([85*(86)]/2)/85} =43.

5. On a road three consecutive traffic lights change after 40, 48 and 56 seconds respectively. If the lights are first switched on at 10:00 AM sharp, at what time will they change simultaneously?
A) 10.35m
B) 10.28am
C) 10.40am
D) 10.43am
E) None

View Answer

Option B
Solution:
LCM of 40,48,56=1680sec
Hence, the lights will change simultaneously after 28 minutes.

6. Find the least number of five digits which when divided by 40, 60, and 75, leave remainders 31, 51 and 66 respectively.
   A) 10136
   B) 10102
   C) 10191
   D) 10111
   E) None

View Answer

Option C
Solution:
Difference, 40-31 = 9
60-51 = 9
75-66 = 9
Difference between numbers and remainder is same in each case.
Then ,
The answer = {(LCM of 40, 60, 75)-9}
LCM = 600
But, the least number of 5 digits = 10000
10000/600, we get remainder as 400.
Then, the answer = 1000-(600-400)-9; = 10191.

7. X takes 4 days to complete one-third of a job. Y takes 3 days to complete one-sixth of the job and Z takes 5 days to complete half the job. If all of them work together for 3 days and X and Z quit, how long will it take for Y to complete the remaining work done.
   A) 6
   B) 5 1/10
   C) 4 2/3
   D) 7
   E) None

View Answer

Option B
Solution:
X one day work 1/12
Y one day work 1/18
Z one day work 1/10
Let Y take n days to complete remaining work then
3/12 +3/18+ 3/10+n/18=1
n/18= 1-1/4-1/6-3/10
n/18=17/60
n= (17*18)/60=5 1/10 days.

8. An Employer pays Rs. 15 for each day a worker works, and forfeits Rs. 5 for each day he is idle. At the end of 40 days, a worker gets Rs. 160. For how many days did the worker remain idle?

A) 26
B) 28
C) 18
D) 22
E) None

View Answer

Option D
Solution:
Suppose the worker remained idle for x days. Then,
He worked for (40 – x) days.
=15 (40 – x) – 5x =160|
600-15x-5x=160
20x=600-160
20x=440
x = 22.

9. The ratio between the length and the breadth of a rectangular park is 4 : 1. If a man cycling along the boundary of the park at the speed of 15 km/hr completes one round in 10 minutes, then the length of the park (in sq. m) is:
A) 850
B) 1000
C) 600
D) 560
E) None

View Answer

Option B
Solution:
Perimeter = Distance covered in 10 min.
=(15000/60)*10 =2500m
Let h = 4x and b = x
Then, 2(4x + x) = 2500
x = 250.
then l=4*250 =1000.

10. An error 3% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is:
A) 5.45%
B) 5.10%
C) 6.09%
D) 4.5%
E) None

View Answer

Option C
Solution:
Let 100 cm is read as 103 cm.
Area 100*100=10000
Error area 103*103=10609
Diff=609.
%ge error=(609/10000)*100 =6.09%.

1. A profit of 30% is made on goods when a discount of 20% is given on the marked price. What profit per cent will be made when a discount of 30% is given on the marked price?
A) 11
B) 13.75
C) 12.5
D) 6.5
E) None

View Answer

Option B
Solution:
discount 80 130 (profit)
MP 100 ? ==> (130*5)/4
Then 100 (130*5)/4
Discount 70 ? ==> (13*5*7)/4
=113.75.

2. A shopkeeper marks up the price of his product by 20%. If he increases the discount from 5% to 10% ,the profit would decrease by Rs 21. How much profit/ loss would he earn if he gives a discount of 20% on the marked price?
A) Rs14 loss
B) Rs14 profit
C) Rs20 loss
D) Rs20 profit
E) None

View Answer

Option A
Solution:
Let CP be 100 then MP 120
5% discount =114.
10% discount =108.
Diff 6 21
(CP)100 ?==> 350.
Then MP=20% of 350=70=350+70=420.

Now 20% discount 20% of 420 =336.
Loss =350-336=Rs14.

3. A number, x equals 80% of the average of 5, 7, 14 and a number y. If the average of x and y is 26, then value of y is
   A) 28
   B) 36
   C) 25
   D) 39
   E) None

View Answer

Option D
Solution:
Average of 5,7,14 and y=(5+7+14+y) /4
Then x= 80% of (5+7+14+y) /4
x=(26+y) /5–1
(x+y)/2=26 –2
Solving 1 and 2 y=39.

4. The average age of a family of 6 members is 20 years. If the age of the youngest member be 5 years, the average age of the family at the birth of the youngest member was?
   A) 19 yrs
   B) 22 yrs
   C) 16 yrs
   D) 21 yrs
   E) None

View Answer

Option A
Solution:
Total present age of the family (6*20) = 120 yrs
Total age of the family 6 years ago = (120 – 6*5) = 90 years
At that time, Total members in the family = 5
Therefore Average age at that time = 90/5 = 19 yrs..

5. The distance between two cities A and B is 330km. A train starts from A at 7am. and travels towards B at 60 km/hr. Another train starts from B at 8am. and travels towards A at 75 km/hr. At what time do they meet?
   A) 11am
   B) 11.30am
   C) 10.30am
   D) 10am
   E) None

View Answer

Option D
Solution:
Distance travelled by first train in one hour
= 60 x 1 = 60 km
Therefore, distance between two train at 9 a.m.
= 330 – 60 = 270 km
Now, Relative speed of two trains = 60 + 75 = 135 km/hr
Time of meeting of two trains =270/135=2 hrs.
Therefore, both the trains will meet at 9 + 2 = 10 A.M.

6. Speed of a man in still water is 6 km/hr and the river is running at 4km/hr. The total time taken to go to a place and come back is 18 hours. What is the distance traveled?
A) 45km
B) 40km
C) 60km
D) 50km
E) None

View Answer

Option C
Solution:
Down speed= 6+4= 10
Up speed= 6-4=2
Let distance travelled = X
(X/10)+(X/2)= 18
X= 30 km
Total distance is 30+30=60.

7. A tricolor flag is to be formed having three adjacent strips of three different colors chosen from six different colors. How many different colored flags can be formed with different design in which all the three strips are always in horizontal positions?
A) 110
B) 90
C) 120
D) 85
E) None

View Answer

Option C
Solution:
First strips can be coloured in 6ways and second strip can be coloured in 5ways and third strip can be coloured in 4ways.
Hence all the strips can be coloured in 6*5*4=120ways.

8. There are 7 men and 8 women. In how many ways a committee of 4 members can be made such that a particular woman is always included.
   A) 380
   B) 410
   C) 290
   D) 364
   E) None

View Answer

Option D
Solution:
There are total 15 people, a particular woman is to be included, so now 14 people are left to chosen from and 3 members to be chosen.
So ways are 14C3=(14*13*12) /(3*2*1)
=364.

9. Fresh fruit contains 68% water and dry fruit contains 20% water. How much dry fruit can be obtained from 100 kg of fresh fruits ?
   A) 40
   B) 35
   C) 46
   D) 56
   E) None

View Answer

Option A
Solution:
Quantity of pulp in fresh fruit =100-68=32.
The quantity of dry fruit obtained be x kg
Then 80% of x = 32.
X=40.

10. In covering a certain distance, the speeds of A and B are in the ratio of 3 : 4. A takes 30 minutes more than B to reach the destination. The time taken by A to reach the destination is :
    A) 4hrs
    B) 3hrs
    C) 2hrs
    D) 2.5hrs
    E) None

View Answer

Option C
Solution:
Ratio of speeds = 3:4. Ratio of times taken = 4:3.

Suppose A takes 4x hrs and B takes 3x hrs to reach the destination
4x-3x=30/60==>x=1/2.
Then time taken by A =4*1/2=2hrs.

- A Man started his journey, he travelled 400 km, at the speed of 40 km/hr then he went to another 300 km, at the speed of 20 km/hr. Further he went 600 km, at the speed of 30 kmk/hr. The average speed of a Man is:

A) 28 8/9km/hr
B) 29 5/6km/hr
C) 30.5km/hr
D) 32km/hr
E) None

View Answer

Option A

Solution:

Average Speed =Total distance /Total time
=(400+300+600)/[(400/40)+(300/20)+(600/30)]
=1300/(10+15+20)
=1300/45
=28 8/9

- A Bike travels the first 1/4 of a certain distance with speed of 10km/hr ,the second 1/4 distance with a speed of 20km/hr , the third 1/4 distance with a speed of 30km/hr and the last 1/4 distance with a speed of 40km /hr the average speed of the bike for whole journey is

A) 20km/hr
B) 18km/hr
C) 24km/hr
D) 22km/hr
E) None

View Answer

Option E

Solution:

Assume that the total distance be 80km. then for each part 20km.
Average speed = Total distance /Total time
=8/[(20/10)+(20/20)+(20/30)+(20/40)] =80/(2+1+2/3+1/2)
=80/([12+6+4+3]/6)==>80*6/25=19.2km/hr.

- Four cards are drawn at random from a well-shuffled deck of cards. What is the probability of getting all the four cards of same terms?

A) 13/20825
B) 1/20825
C) 17/1665

D) 5/25850
E) None

View Answer
Option B
Solution:
All four are same no we can take in 13 ways
Then required probability 13/52C4
13/(52*51*50*49/1*2*3*4)=13/270725=1/20825

- A Salesman charges sales tax of x% upto Rs.2,000 and above it he charges y%. A customer pays total tax of Rs 320, when he purchases the goods worth Rs. 6,000 and he pay's the total tax of Rs. 680 for the goods worth Rs. 12,000. The value of x and y is:

A) 4,6
B) 2,3
C) 1,4
D) 2,4
E) None

View Answer
Option A
Solution:
2000*x/100+4000*y/100=320==>x+2y=16–1
2000*x/100+10000*y/100=680==>x+5y=34—2
Solving 1 and 2 we get x=4 y=6

- Two pipes A and B when working alone can fill a tank in 36 min. and 45 min. respectively. A waste pipe C can empty the tank in 30 min. First A and B are opened. After 7 min., C is also opened. In how much time (in mins) will the tank be full ?

A) 39
B) 45
C) 40
D) 53
E) None

View Answer
Option A
Solution:
36…….5
45…..LCM 180……..4
30 ……-6
First A and B work for 7mins
1mins==>5+4=9unit
7mins 9*7=63.
180-63=117
Now all 3 pipes open

1min(5+4-6)=3
117/3=39mins

- 3 small pumps and a large pump are filling a tank. Each of the three small pumps works at 2/3 rd the rate of the large pump. If all 4 pumps work at the same time, they should fill the tank in what fraction of the time that it would have taken the large pump alone?

A) 1/7
B) 2/3
C) 1/3
D) 1/5
E) None

View Answer

Option C

Solution:

Let larger pipe can fill tank in 2hrs
Then smaller pipe can fill in 3hrs.
And 3 smaller pipe can fill in 1 hrs.
Time taken by all 4 pipes to fill the tank =1/(1+1/2)=1/(3/2) =2/3
Required answer 2/3*1/2=1/3

- Sharma takes 5 hours to type 5 pages while Swetha takes 4 hours to type 80 pages. How much time will they take working together on different computer to type an assignment of 150 pages.

A) 7
B) 9
C) 8
D) 5
E) None

View Answer

Option D

Solution:

In one hour number of pages type by Sharma = 50/5 = 10 and similarly for Swetha it is 80/4 = 20.
Now to type 150 pages they will take, (10 + 20)*T = 150, T = 5 hours

- If 12 mechanic working 4hours a day can repair 360 cars in 80 days, then no. Of cars repaired by 16 mechanic in 24 days each working 8hours in a day

A) 320
B) 288
C) 250
D) 344
E) None

View Answer

Option B
Solution:
12*4*80/360=16*24*8/x
X=8*36=288

- Two trains P and Q are separated by 220 km on a straight line. One train starts at 8 am from one station A towards B at 40 km/hr and another train starts from B towards A at 9 am at 60 km/hr. At what time will both train will meet?

A) 11.15am
B) 11am
C) 10.30am
D) 10.48am
E) None

View Answer
Option D
Solution:
In one hour first train will cover 40 km, so distance between them remains only 180.
Now
x/40 = (180 –x)/60, we get x = 72,
so time = 72/40 = 1 hour 48 minutes
so both will meet at 10:48 am

- A and B are two partners and they have invested Rs. 54,000 and Rs. 90,000 in business. After one year A received Rs 1200 as his share of profit out of total profit of Rs. 4200 including his certain commission on total profit since he is a working partner and rest profit is received by B. What is the commission of A as a percentage of the total profit?

A) 1200
B) 1350
C) 1400
D) 1150
E) None

View Answer
Option A
Solution:
Ratio of profit of A : B (excluding commission of A) = 54000 : 90000 =>3 : 5
Now the share of profit of B = 4200 – 1200 = Rs. 3000
So the share of profit A (excluding commission) = Rs. 1800
So the commission of A = 3000 – 1800 = 1200

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The number of students in 3 classes are in the ratio 4:5:6. If 15 students are increased in each class this ratio changes to 11:13:15. The total number of students in the three classes in the beginning was
A) 165

B) 150
C) 175
D) 180
E) None

View Answer

Option B

Solution:

Let the number of students in the classes be 4x, 5x and 6x respectively;
Total students = 4x+5x+6x = 15x.
Given ,
(4x+15)/(5x+15) = 11/13
3x=30==>x=10.
Then Total no of students is 15x=15*10=150.

- A, B and C have 40, x and y balls with them respectively. If B gives 20 balls to A, he is left with half as many balls as C. If together they had 60 more balls, each of them would have had 100 balls on an average. What is the ratio of x to y?

A) 4 : 3
B) 3 : 2
C) 2 : 3
D) 2 : 5
E) None

View Answer

Option C

Solution:

Given,
40+x+y+60/3=100
X+y=200—1
x-20=y/2
2x-y=40—2
Solving 1 and 2
We get x=80, y=120.
Ratio of x:y=2:3

- The incomes of A, B, C are in the ratio of 12 : 9 : 7 and their spending are in the ratio 15 : 9 : 8. If A saves 25% of his income. What is the ratio of the savings of A, B and C respectively?

A) 12:15:19
B) 11:15:18
C) 15: 18:11
D) 21:24:29
E) None

View Answer

Option C
Solution:
Let the income be 12x, 9x, 7x and expenditure is 15y, 9y, 8y.
I-E=S
A 12x-15y=25%of 12x=3x
9x=15y==>y=3x/5
B Saving = 9x-9y
C Saving = 7x-8y
Substitute y value
Savings Ratio A:B:C
3x: 9x-9*3x/5 : 7x-8*3x/5
3x:18x/5:11x/5==>15:18:11

- A Student obtained equal marks in Maths and Science. The ratio of marks in Science and Social is 2:3 and the ratio of marks in Maths and English is 1 : 2. If he has scored an aggregate of 55% marks. The maximum marks in each subject is same. In how many subjects did he score greater than 50% marks?

A) 1
B) 2
C) 3
D) 4
E) None

View Answer
Option B
Solution:
M:S=1:1, S:So= 2:3, M:E=1:2
Then M: S: So: E=2:2:3:4
Now 2x+2x+3x+4x/4=11x/4=55%
X=20.
So Marks, M=40, S=40, So=60, E=80.
Above 50 mark is in 2 subjects.

- In a class, the number of girls is 30% more than that of the boys. The strength of the class is 92. If 8 more girls are admitted to the class, the ratio of the number of boys to that of the girls is

A) 4:5
B) 3:2
C) 2:3
D) 4:7
E) None

View Answer
Option C
Solution:
G:B=130:100=13:10

Then (10+13)23 92
G 13 52
B 10 40
If 8 girls admitted then total girls is 52+8=60
Now ratio of B:G=40:60=2:3.

- Rs 3440 is divided, among A, B, C and D such that B's share is 6/11th of A's; C's share is 1/4th of B's and D has 2/5th as much as B and C together. Find A's share

A) 1760
B) 1540
C) 1320
D) 1850
E) None

View Answer

Option A

Solution:

Let A's share be 1
Then B's share is 6/11*1=6/11
C's share is 6/11*1/4=3/22
D's share is 2/5*(6/11+3/22)=3/11
A:B:C:D=1:6/11:3/22:3/11=22:12:3:6
Total 43(22+12+6+3) 3440
A's share 22 ?==>1760

- When 20 is added to the numerator and denominator, then the new ratio of numerator to denominator becomes 7:8. What is the original ratio?

A) 3:4
B) 4:5
C) 4:3
D) Can't be determined
E) None

View Answer

Option D

Solution:

Let the fraction be x/y.
Then (x+20)/(y+20) =7/8
We have two variable and only one equation so we can't find the solution.

- The value of the diamond is in proportion to the square of its weight A diamond was broken into 3 parts in the ratio of 3: 4: 5, thus a loss of Rs.9.4 lakh is incurred. What is the actual value of diamond (in lakhs)?

A) 12
B) 13.5

C) 11
D) 14.4
E) None

View Answer
Option D
Solution:
Ratio of broken parts is 3x : 4x: 5x
Value of broken parts of diamond is $(3x)^2 + (4x)^2 + (5x)^2 = 50x^2$
The value of original diamond $(3x+4x+5x)^2 = 144x^2$
Then loss in value $=144x^2 – 50x^2 = 9.4$ lakh
$x^2 = 10000$.
The actual value of the diamond is $144\ x^2 = 14.4$lakh

- The ratio of the monthly salaries of P and Q is in the ratio 10 : 13 and that of Q and R is in the ratio 13 : 14. Find the monthly income (in Rupees) of R if the total of their monthly salary is Rs 1,85,000.

A) 70,000
B) 81,000
C) 55,000
D) 60,000
E) None

View Answer
Option A
Solution:
P/Q = 10/13 and Q/R = 13/14
So P : Q : R = 10: 13: 14
Total (10+13+14) is 37 == 1,85,000
So R's salary 14 ? ==>70,000.

- Two candles of the same height are lighted at the same time. The first is consumed in 8 hrs and second in 4 hrs. Assuming that each candle burns at a constant rate. In how many hour after being lighted, the rate between the first and second candles become 3 : 1?

A) 2hrs 45min
B) 3hrs 12min
C) 3hrs 20min
D) 2hrs 25min
E) None

View Answer
Option B
Solution:
After x times ratio become 3:1.
Then (1-x/8)/(1-x/4)=3/1

8-x/2(4-x)=3/1
X=16/5hrs ie 3hrs 12min.

- A boat goes 24 km upstream and 54 km downstream in 6 hrs. In 8 hrs, it can go 36 km upstream and 48 km downstream. The speed (in km/hr) of the boat in still water is:

A) 21
B) 19.5
C) 13.75
D) 18
E) None

View Answer

Option B

Solution:

General method
24/u-v+54/u+v=6—1
36/u-v+48/u+v=8—2
By solving 1 and 2 we got the ans.
Shortcut
U/s……..D/s…….t
24……..54……..6 common terms cut= 4 9 1
36……..48……..8 9 12 2
u/s= (4*12)-(9*9)/(9*2)-(12*1) ==u/s=33/6=5.5
d/s=(4*12)-(9*9)/(4*2)-(9*1) ==d/s=33/1=33
then U=(33+5.5)/2=38.5/2=19.25
V= (33-5.5)/2=27.5/2=13.75

- A boat takes 30 hours for travelling downstream from point A to point B and coming back to point C midway between A and B. If the velocity of the stream is 5 km/hr and the speed of the boat in still water is 10 km/hr, what is the distance between A and B?

A) 146km
B) 150km
C) 180km
D) 190km
E) None

View Answer

Option C

Solution:

Downstream speed= 10+5 = 15
Upstream speed = 10-5 = 5
Now total time is 30 hours
If distance between A and B is d, then distance BC = d/2
Now distance/speed = time, so

d/15 + (d/2)/5= 30
Solve, d = 180 km.

- A boat takes 150 min less to travel 40 km downstream than to travel the same distance upstream. The speed of the stream is 4 km/hr. What is the downstream speed?

A) 16 km/hr
B) 12 km/hr
C) 10 km/hr
D) 8 km/hr
E) None

View Answer

Option A

Solution:

Let speed of boat in still water = x km/hr
So speed upstream = x-4, and speed downstream = x+4
Now given:
Time to travel 40 km downstream = time to travel 40 km upstream – 150/60
So 40/(x+4) = 40/(x-4) – 5/2
8/(x-4) – 8/(x+4) = 1/2
x+4 – (x-4)/(x2 – 16) = 1/16
solve, x = 12
so downstream speed = 12+4=16km/hr.

- Two pipes can fill a tank with water in 15 and 12 hours respectively and a third pipe can empty it in 4 hours. If the pipes be opened in order at 10, 11 and 1 p.m. respectively, the tank will be emptied at

A) 11 : 40 a.m.
B) 12 : 40 p.m.
C) 4.40p.m.
D) 2.40p.m.
E) None

View Answer

Option C

Solution:

Let tank will be emptied in x hrs after 10am
x/15 + (x-1)/12 – (x-3)/4 =0
x = 40/6 = 6 2/3hrs = 6hrs 40min
Then It will be emptied in 10+6.40=4.40p.m.

- Pipes A and B can fill a tank in 10 and 12 hours respectively. Pipe C can empty it in 20 hours. If all the three pipes are opened together, then the tank will be filled in (in hours):

A) 7
B) 5.25

C) 6
D) 7.30
E) None

View Answer
Option D
Solution:
Pipes A,B,C filled together in 1 hour
=1/10 + 1/12 − 1/20 = (11-3)/60 8 /60
Tank filled in 60/8 = 7 ½.

- An army lost 10% its men in war, 10% of the remaining due to diseases died and 10% of the rest were disabled. Thus, the strength was reduced to 729000 active men. Find the original strength.

A) 10 Lakh
B) 12Lakh
C) 15Lakh
D) 18Lakh
E) None

View Answer
Option A
Solution:
Let army has 100 men.
10% loss in war, so remained are 90 men
then,10% of 90 died due to diseases, remained 90-9 = 81
then again, 10% of 81 again disabled
So, remained men = 90% of 81
90% of 81 = 729000
(90×81)/100 =729000
1= 10000
100 = 1000000
then total men are 10,00,000.

- Weights of two friends P and Q are in the ratio 4:5. If P's weight is increased by 10% and total weight of P and Q become 82.8 kg, with an increases of 15%. By what percent did the weight of Q has to be increased?

A) 19%
B) 22%
C) 17.5%
D) 12.5%
E) None

View Answer
Option A
Solution:
10……..x

…….15
x-15 : 15-10
Now, given ratio of P and Q's weight = 4:5
Hence, (x-15)/(15-10) = 4/5
x = 19%.

- A shopkeeper sold a T.V. set for Rs. 17,940 with a discount of 8% and earned a profit of 19.6% . What would have been the percentage of earned if no discount was offered ?

A) 25%
B) 30%
C) 22.5%
D) 40%
E) None

View Answer

Option B

Solution:

SP=Rs 17,940.
MP =17940*100/92=19500
CP=17940*100/119.6=15000
So profit without discount= 19500-15000=4500

- Fresh grapes contain 80% water, while dry grapes contain 10% water. If the weight of dry grapes is 500 kg, then what is its total weight (in kg) when it is fresh?

A) 2000
B) 2200
C) 2250
D) 2800
E) None

View Answer

Option C

Solution:

weight of dry grapes = 500 kg
Since dry grapes contain 10% of water, weight of grape pulp in 500 kg of dry grapes
= 90% of 500 = 450 kg
Let x be its total weight when it is fresh.
Fresh grapes contain 80% water. Therefore, 20% of x is 450 kg
100% of x = 450 × 5 = 2250

- If a 36 inches long strip cloth shrinks to 33 inches after being washed, how many inches long will the same strip remain after washing if it were 48 inches long?

A) 44 inches
B) 46 inches
C) 55 inches
D) 60 inches

E) None

View Answer

Option A

Solution:

Shrinking of cloth,
= [(36-33)/36]*100.
= 100/12%
Second time the strip shrinks,
= (48*100)/1200 = 4 inches
hence , the cloth remains = 48-4 = 44.

- Two vessels contain mixtures of milk and water in the ratio of 4:9 in the first vessel and in the ratio of 2:7 in the second. In what ratio should the contents of these two vessels be mixed such that the resultants mixture has milk and water in the ratio of 2:5?

A) 26:9
B) 14:10
C) 25:18
D) 22:8
E) None

View Answer

Option A

Solution:

Milk in 1st vessel 4/13
Milk in 2nd vessel 2/9
Milk in mixed vessel 2/7
4/13…….2/9
…….2/7
2/7 – 2/9 …… 4/13 – 2/7
4/63 2/91
==>4/9 : 2/13 = 26:9

- A alone would take 8 hrs more to complete a job than than both A and B would together. If B worked alone, he took 2 hrs more than A and B would together. How many days A and B together can do it.

A) 6
B) 10
C) 4
D) 15
E) None

View Answer

Option C

Solution:

let A and B work together is x. then A=x+8, B=x+2

Then x=(x+8)(x+2)/(x+8)+(x+2)
x = [x^2 + 10x + 16]/(2x+10)
==>2x^2 + 10x = x^2 + 10x + 16
x^2 = 16
==>x=4

- In how many different ways the letters of the world CALCULATOR be arranged in such a way that all vowels always come together?

A) 45320
B) 49635
C) 52300
D) 60480
E) None

View Answer
Option D
Solution:
CALCULATOR==>vowels AUAO=7!(6letters +vowels)*4!
For repetation 2!
Then 7!*4!/ 2!

- Incomes of two companies A and B are in the ratio of 2:3. Had the income of company A been more by Rs 20 lakh, the ratio of their incomes would have been 10 : 9. What is the income of company B?

A) Rs 80 lakh
B) Rs 45 lakh
C) Rs 52 lakh
D) Rs 46 lakh
E) None

View Answer
Option B
Solution:
(2x+20)/3x=10/9
18x+180=30x
x=15.
Then B=3*15=45Lakhs

- How many different 4 – digit numbers can be formed by using the digits of the number 86593247 ?

A) 1680
B) 1920
C) 1540
D) 1620

E) None

View Answer
Option A
Solution:
Out of 8 digit 4 digit no must selected.
nPr = n! / (n-r)!
8P4=8!/(8-4)!
8*7*6*5=1680

- Sam purchased an item for Rs 7200 and sold it at a loss of 5% , from that money he purchased another item and sold it at a gain of 5% what is his over all gain/loss?

A) Rs 18 loss
B) Rs36 loss
C) Rs18 gain
D) Rs36 gain
E) None

View Answer
Option A
Solution:
7200*(95/100)*150/100==>7182
Then 7200-7182=18 loss.

- In a mixture 55 litres, the ratio of milk and water 5 : 6. If the this ratio is to be 6 : 5, then the quantity of milk to be further added is:

A) 12l
B) 15l
C) 11l
D) 18l
E) None

View Answer
Option C
Solution:
Total 55 Litres
Ratio 5:6
Then 11 == 55
5 ? == 25
6 ? == 30
Then (25+x)/30=6/5
125+5x =180
==> x=11litres.

- A shopkeeper bought 75kg rice at the rate of Rs 16/kg. He sold 35kg of it at 20% profit and the remaining 40kg at 15%profit. What is his total profit %ge in this transaction ?

A) 15 1/3
B) 16 1/4
C) 17 2/3
D) 18 2/3
E) None

View Answer

Option C

Solution:

75*(100+x/100)=35*120/100+40*115/100
75x = 700+600
X=1300/75==>17 2/3.
(Or)
75x=35*20+40*15
X=1300/75==>17 2/3

- The average weight of a group of 20 boys was calculated to be 89.4 kg and it was later discovered that one weight was misread as 78 kg instead of the correct one of 87 kg. The correct average weight is:

A) 88.95kg
B) 89.25kg
C)89.55kg
D) 89.85kg
E) None

View Answer

Option D

Solution:

Total actual weight = (89.4 × 20 – 78 + 87) kg
= 1797 kg.
∴ Correct average weight =1797/20 = 89.85 kg

- In a class of 120, where girls are twice that of boys, Lokesh ranked thirty fifth from the top, if there are 10 girls ahead of Lokesh , how many boys are after him in rank?

A) 20
B) 16
C) 15
D) 25
E) None

View Answer

Option C

Solution:

No of boys = x; No of girls = 2x;

x+2x = 120 => 3x = 120
x (Boys)= 40 ; 2x(Girls) = 80
Number of student behind Lokesh = 120 – 35 = 85
No of girls behind Lokesh = 80 – 10 = 70
No of boys behind Lokesh = 85 – 70 = 15

1. In a partnership , P invests 1/2 of the capital for 1/2 of the time , Q invests 1/6 of the capital for 1/6 of the time and R , the rest of the capital for the whole time. What is the share of R in the profit Rs. 6600.?
   A) Rs3600
   B) Rs1500
   C) Rs2000
   D) Rs3000
   E) None

View Answer

Option A
Solution:
If P invest x/2 Rs for y/2 month and Q invest x/6 for y/6 month
Then R=x-x/2-x/6=x/3 for y month.
Then ratio become x/2*y/2 :x/6*y/6 :x/3*y ==>1/4:1/36:1/3==>9:1:12
Then R 's share is 6600*12/22= Rs 3600

2. In a business, the Capital of B was 3/4 times that of A. After 8 Months B withdrew 3/4 of his Capital and after 10 months A withdraw 1/2 th of his Capital. At the end of the year, if the total profit Rs. 35,500/- . Find the amount received by A in Rs. ?
   A) Rs.25,800
   B) Rs. 30,000
   C) Rs. 33,000
   D) Rs. 22,000
   E) None

View Answer

Option D
Solution:
Let capital of A be 4x
Then, capital of B be 3x
After 8month B withdrew 3/4 of capital so left with 3x – 3/4 * 3x = 3x/4
After 10 month A withdrew 1/2 of capital ie 4x/2
Ratio become (4x * 10)+(4x/2 * 2) : (3x * 8)+(3x/4*4)==> 44:27
Then (44+27)/71 * 35500
Then A's amount 44 ? ==> Rs22,000.

3. Two equal sums of money were invested one at 6% and another at 6 ½%. At the end of 8yrs the S.I received on the latter exceeded that received on the former by Rs87.2.Find each sum.
   A) Rs 2160
   B) Rs2180
   C) Rs1090
   D) Rs2184
   E) None

View Answer

Option B
Solution:
For Rs 100 6% interest is Rs6 and for Rs 100 61/2%interest is 61/2.
For Rs 100 interest difference is 61/2-6=1/2
This ½ ie 50paise diff is for 1yr.
Now for 8yrs it become 8*0.5=4Rs
For 100 4(8yrs)
? 87.2(diff)==> 25*87.2=Rs2180

4. A man lent out Rs.9600 at 7/4 % per annum for a year and 6 months. At the end of the duration, the amount he earned as S.I was:
   A) Rs.350
   B) Rs.556
   C) Rs. 242
   D) Rs.322
   E) None

View Answer

Option C
Solution:
Given P = Rs.9600, R = 7/4 % and N = 1 year and 6 months = 1 + 6/12 year = 3/2 years.
S.I = PNR/100 ==>(9600 *3/2*7/4)/100 = Rs242

5. Sheela sold an article for Rs. 8000 and incurred a loss. Had he sold the article for Rs.9500, his gain would have been equal to half of the amount of loss that he incurred. At what price should he sell the article to have 30% profit?
   A) Rs.850
   B) Rs.9000
   C) Rs.11700
   D) Rs 10560
   E) None

View Answer

Option C
Solution:
Let the cost price be x.
Then, loss = (x – 8000)
Again, profit = (9500 – x)
Now, (9500 – x) = (x – 8000)/2
3x = 19000 + 8000 = 27000
x = 27000/3 = 9000
Selling price = (9000×130)/100 = Rs. 11700

6. The price of a car is Rs. 6,50,000. It was insured for 70% of its price. The car got completely damaged and the insurance company paid 80% of the insured amount. What is the price of the difference between the price of the car and the amount of insurance received?
A) Rs2,86,000
B) Rs3,42,000
C) Rs2,40,000
D) Rs2,85,000
E) None

View Answer

Option A
Solution:
Total value = 100%
Car was insured to 70% of its price
Insurance company paid 80% of the insurance.
Then 100*70/100*80/100=56%
Difference% is 100-56=44%
6,50,000*44/100=2,86,000.

7. A shopkeeper marks up his goods by 30% and then gives a discount of 30%. Besides he cheats both his supplier and customer by 100 g, i.e., he takes 1100 g from his supplier and sells only 900 g to his customer. What is his net profit percentage? (Rounded off to two decimal points)
A) 12.33
B) 13.65
C) 11.22
D) 10.45
E) None

View Answer

Option C
Solution:
Loss is -30+30-(30*30/100)=9%loss
Profit =(1100-900)=(200/900)*100=200/9%

Profit %ge is -9 +200/9 –(9*200/9/100)=101/9=11.22

8. The average of marks obtained by 150 candidates was 29. If the average of the passed candidates was 35 and that of the failed candidates was 20, then the number of those candidates, who passed the examination was:
   A) 80
   B) 60
   C) 20
   D) 90
   E) None

View Answer

Option D
Solution:
If the number of candidates passed = x
∴ 35x + 20 (150 – x) = 150 × 29
⇒ x = 90

9. An alloy contains only sulphur and aluminium. One such alloy weighing 25 gm contains sulphur and aluminium in the ratio of 3 : 2 by weight. If 15 gm of sulphur is added then find what amount of aluminium has to be removed from the alloy such that the final alloy has sulphur and aluminium in the ratio of 7 : 2 by weight?
   A) 2 gm
   B) 1.4 gm
   C) 3 gm
   D) 3.8 gm
   E) None

View Answer

Option B
Solution:
Alloy has 25gm in the ratio 3:2
Then 5 25
3 ?=15gm sulphur
2 ?=10gm aluminium
Now 15gm sulphur added and x gm of aluminium removed
Then 15+15/10-x=7/2=10/7=1.4gm

10. A bank offers 5% compound interest calculated on half-yearly basis. A customer deposits Rs. 1600 each on 1st January and 1st July of a year. At the end of the year, the amount he would have gained by way of interest is:
    A) 121
    B) 160
    C) 240

D) 260
E) None

View Answer

Option A
Solution:
amount= p[1+(R/2)/100]^2n here n is 1 year
so amount = 1600[1+(5/2)/100]^2
=1600[1+(5/200)]^2
=1681.
amount of money deposited on july
amount=p[1+(R/2)/100]^2n n=1/2 yr
=1600[1+(5/200)]
=1640.
add both amounts
1681+1640=3321
1600 twice the customer deposited 1600*2=3200
3321-3200=121.

1. A box contains tickets numbered 1 to 160. One ticket is drawn at random. What is the probability that the number on ticket is a multiple of either 3 or 5?
   A) 17/32
   B) 15/32
   C) 5/8
   D) 3/8
   E) None of these

View Answer

Option B
Solution:
Multiples of 3 up to 160 = 160/3 = 53 (take only whole number before the decimal part)
Multiples of 5 up to 160 = 160/5 = 32
Multiples of 15 (3×5) up to 160 = 160/15 = 10
So total such numbers are = 53 + 32 – 10 = 75
So required probability = 75/160 = 15/32

2. A and B started a business by investing Rs 2500 and Rs 2800 respectively. After 3 months, A invested Rs 200 more and at the same time B withdrew Rs 400 from his investment. If after the end of 10 months from the start of business, total profit earned by them is Rs 28,380, what is A's share from it?
   A) Rs 14830
   B) Rs 19240
   C) Rs 13820

D) Rs 13760
E) Rs 14520

View Answer

Option E
Solution:
Ratio of profit share of A : B is
2500*3 + 2700*7 : 2800*3 + 2400*7
25*3 + 27*7 : 28*3 + 24*7
25 + 9*7 : 28 + 8*7
25+63 : 28+56
88 : 84
22 : 21
So A's share = 22/(22+21) * 28380 = Rs 14520

3. Ratio of age of A 3 years hence to age of B 3 years ago is 9 : 10. Also after 7 years B's age will be twice A's age 4 years ago. A is younger than B by how many years?
A) 9 years
B) 5 years
C) 7 years
D) 6 years
E) 8 years

View Answer

Option A
Solution:
(A+3)/(B-3) = 9/10
(B+7) = 2(A-4)
Solve both
A = 24, B = 33

4. A person invested a total of Rs 6000 in two schemes A and B. Scheme A offers 20% rate of interest at compound interest and scheme B offers 12% per annum rate of interest. If after 2 years the person got a total of Rs 8140, what is the amount invested in scheme A?
A) Rs 2500
B) Rs 3000
C) Rs 4500
D) Rs 3500
E) Rs 4000

View Answer

Option D

Solution:

Let amount invested in scheme A = Rs x, so in B = Rs (6000-x)
Interest after 2 years = 8140-6000 = Rs 2140
So
(x * [1 + 20/100]2 – x) + (6000-x)*12*2/100 = 2140
36x/25 – x + 1440 – 6x/25 = 2140
x/5 = 2140-1440
Solve, x = Rs 3500
So amount invested in scheme A = Rs 3500

5. 15 men can complete a work in 8 days. Same work can be completed by 20 women in 12 days. Two groups are made containing 10 men and 15 women respectively. Both groups work alternately for 4 days each starting with men's group. In this how in how many days the work will get completed?
A) 15 days
B) 13 1/3 days
C) 20 days
D) 16 2/3 days
E) 12 days

View Answer

Option B

Solution:

15 men in 8 days, so 10 men in 15*8/10 = 12 days
20 women in 12 days, so 15 women in 20*12/15 = 16 days
10 men 1 work in 12 days, so in 4 days they do 4/12 = 1/3rd word
15 women 1 work in 16 days, so in 4 days they do 4/16 = 1/4th work
in 1st 4 days work done = 1/3, in next 4 days work done = 1/4, in next 4 days men's turn so they did 1/3 work
Up to now wok done is 1/3 + 1/4 + 1/3 = 11/12
Remaining work = 1 – 11/12 = 1/12
Now women's turn
15 women 1 work in 16 days, so 1/12 work in 1/12 * 16 = 4/3 days = 1 1/3 days
so total days = 4+4+4+1 1/3 = 13 1/3 days

6. A businessman sells a commodity at 20% profit. If he had bought it 20% less and sold it for Rs6 less, then he would have gained 25%. What is the cost price of the commodity?
A) Rs. 10
B) Rs. 25
C) Rs. 40
D) Rs. 30
E) Rs. 55

View Answer

Option D

Solution:

20% profit = 1/5. So CP = 5, SP = 5+1 = 6

Now make CP 20% less, CP becomes = 80/100 * 5 = 4, Now there is 25% profit So SP becomes 5

Original SP = 6, final = 5. Difference is 1

So 1 == 6 [Rs 6 less] So CP = 5 == 30

7. A train start from point A and move towards B. It met with an accident after 35km and covered remaining distance at 2/3rd of its speed and it late by 30 minutes. If the accident happened 20km after then train would be 15 minutes late. Find the distance?
   A) 64 km
   B) 73 km
   C) 80 km
   D) 85 km
   E) 75 km

View Answer

Option E

Solution:

It saves 15 min in 20 km

So for 30min it cover 20/15 * 30 = 40km

So distance = 40 + 35= 75 km

8. In a bag there are three types of coins, 1rupee, 50 paisa and 25paisa in the ratio of 6:10:12. There total value is Rs224. The total number of coins is?
   A) 425
   B) 484
   C) 448
   D) 434
   E) 440

View Answer

Option C

Solution:

First make ratio according to rupee

6 * 1 : 10 * 1/2 : 12 * 1/4

6 : 5 : 3

(6+5+3) 14 = 224

1 =16

(6+10+12) = 28 = 28*16 = 448

9. A boat can row to a place 48 km away and come back in 20 hours. The time to row 24 km with the stream is same as the time to row 16 km against the stream. Find the speed of boat in still water.
   A) 1.5 kmph
   B) 3.5 kmph
   C) 5.5 kmph
   D) 7.5 kmph
   E) None of these

View Answer

Option E
Solution:
Downstream speed = 24/x km/hr
Upstream speed = 16/x km/hr
48/(24/x) + 48/(16/x) = 20
Solve, x = 4 km/hr
So, downstream speed = 6 km/hr, upstream speed = 4 km/hr
Speed of boat = 1/2 * (6 + 4) km/hr = 5 km/hr

10. From a deck of 52 cards, two cards are selected at random. Find the probability of getting at least one spade.
    A) 9/34
    B) 11/32
    C) 15/34
    D) 4/17
    E) 6/17

View Answer

Option C
Solution:
Case 1: 1 spade
Probability = $^{13}C_1$ * $^{39}C_1/^{52}C_2$ = 13/34
Case 2 : Both spades
Probability = $^{13}C_2/^{52}C_2$ = 1/17
Add both cases = 13/34 + 1/17 = 15/34

1. A cistern can be filled by two pipes in 15 minutes and 25 minutes respectively. Both pipes are opened together for a certain time, only 5/6 of quantity of water flows through the former and 5/8 through the other pipe. The obstruction is removed, the cistern is filled by in 5 minutes from that moment. How long was it before the full flow began?
   A) 168/29 min.
   B) 115/21 min.
   C) 145/12 min.

D) 125/11 min.
E) 144/13 min.

View Answer

Option A
Solution:
Pipe I ——— Pipe II
15——————25
LCM = 75
Pipe I = 5*(5/6) = 25/6
Pipe II = 3*(5/8) = 15/8
Decreased efficiency = (25/6)+(15/8) = 145/24
Pipe I + Pipe II = (3+5 efficiency both take 5 minutes = 8 * 5 = 40 unit
Pipe I and Pipe II = 75 – 40 = 35 units
Therefore, time take to fill the cistern =(35*24)/145 = 168/29 minutes

2. There are two articles and the sum of cost prices of these articles is Rs. 500. One of them was sold at a profit of 20% and another at a loss of 20%. Besides if the selling prices of both the articles were same, find the loss.
A)Rs.40
B) Rs.32
C) Rs.25
D) Rs.20
E) Rs.30

View Answer

Option D
Solution:
x*(120/100) = (500-x)(80/100)
=> x = 200
CP of article sold at profit = 200
CP of article sold at loss = 300
Common SP = 300* 80/100 or = 200* 120/100 = 240
Loss = CP – SP = 500 – (2*240)= Rs.20

3. Divide Rs. 2000 into two sums such that, if the first be put out at simple interest for 6 years at 3(1/2) per cent, and the second for 3 years at 4(1/2) per cent, the interest of the first sum would be double that of the second. Find the second part.
A) Rs.800
B) Rs.758
C) Rs.875
D) Rs.790
E) Rs.755

View Answer

Option C

Solution:

Let the first part be x and the second part be (2000-x)
Interest on the first part = (x*6*7)/(100*2) = 21x/100
Interest on the second part = [(2000-x)*3*9]/(100*2)
= [27*(2000-x)]/(200)
Now,
21x/100 = 2* [27*(2000-x)]/200
=> x = 1125
Hence, first part = Rs. 1125 and second part =(2000-1125)= Rs.875

4. In a zoo , the zoo authority announces 40% discount on every on every ticket which costs 50 paise in order to attract more visitors. For this reason, sale off ticket increase by 50%. Find the percentage increase in the number of visitors.
A) 90%
B) 150%
C)100%
D) 98%
E) 112%

View Answer

Option B

Solution:

Let the number of visitors be 100.
Total revenue = 0.50 * 100 = Rs.50
New price = 0.50 *(60/100) = 30 paise
New revenue = 50*(150/100) = Rs.75
Number of visitors = 75/0.30 = 250
% change in number = [(250 -100)/100]*100 = 150%

5. In an office the average age of all the female employees is 21 years and that of male employees is 32 years, where the average age of all the (male and female) employees is 28 years. Find the total number of employees in the office.
A) 150
B) 231
C) 200
D) 180
E) 115

View Answer

Option B

Solution:

21————————32
————-28
4 : 7
4+7 = 11
Hence,
The total number of employees should be multiples of 11.

6. In a business, there are two investors who invests Rs. 50,000 and Rs.65000 resp. and agree that 60% of the profit should be divided equally between them and the remaining profit is to be divided into the ratio of their capitals. If one partner gets Rs. 300 more than the other. Find the total profit.
A) Rs. 5520
B) Rs.4850
C) Rs. 5400
D) Rs. 5750
E) Rs. 3460

View Answer

Option D
Solution:
Ratio of investments is 50 : 65 = 10 : 13
The difference of Rs 300 is in the profit of investments ratio
If x is total profit, then 40% of x is divided in the ratio of investment. So
13/23 * 40x/100 = 10/23 * 40x/100 + 300
Solve, x = Rs 5750

7. In a conical flask , the radius of the base and the height of the flask is in the ratio 5:12 If the volume of the cone is 314 (2/7) cm^3. What is the slant height of the conical flask?
A) 14 cm
B) 13 cm
C) 10 cm
D) 15 cm
E) 18 cm

View Answer

Option B
Solution:
Let the radius be 5x and the height be 12x .
Then,
(1/3) * pi * 25x^2 *12x = 2200/7
=> x = 1
slant height = √[(5)^2 + (12)^2] = 13 cm

8. A bus agency has 162 buses. He sold some buses at 9% profit and rest at 36% profit. Thus he gains 17% on the sale of all his buses. What is the number of buses sold at 36% profit?
   A) 25
   B) 48
   C) 30
   D) 34
   E) 40

View Answer

Option B
Solution:
9% ————————- 36%
————17%
19 : 8
27 ———— 162
1 ————————- 6
Number of buses sold at 36% profit = 8 * 6 = 48

9. 12 similar balls are placed in three distinct baskets, such that no basket is empty. In how many ways it can be done?
   A) 48
   B) 50
   C) 70
   D) 54
   E) 55

View Answer

Option E
Solution:
When **n similar objects** are to be distributed in **k distinct objects**, ways are $^{(n-1)}C_{(k-1)}$
Required ways = 11C2 = 55

10. From a deck of 52 cards two cards are selected at random. Find the probability of getting one heart and one club.
    A) 12/110
    B) 11/102
    C) 13/102
    D) 14/112
    E) 15/122

View Answer

Option C
Solution:
Required probability = (13C1 * 13C1)/52C2 = 13/102

1. A and B together can complete a work in 8 days, B and C in 15 days and C and A in 12 days. They all started work together. After working for 4 days, B left the work. A and C next worked for 3 day after which A also left. Find in how many can C alone complete the work?
A) 25 days
B) 16 days
C) 21 days
D) 13 days
E) 22 days

View Answer

Option B
Solution:
A, B and C together can complete work in = 2*8*15*20/(8*15 + 15*20 + 20*8) = 80/11 days
Worked for 4 days, so they did 4 * 11/80 = 11/20 work
Now A and C worked for 3 days, in 3 days they did = 3 * 1/12 = 1/4 work
So now remaining work = 1 – (11/20 + 1/4) = 1/5
C can complete whole work in – 11/80 – 1/8 = 1/80 – 80 days
So 1/5 work in 1/5 * 80 = 16 days

2. A and B alone can complete a work in 10 and 18 days respectively. Both started the work. After 3 days, A left and C joined B. If they completed the remaining work in 6 days, find the number of days in which C can alone complete the whole work?
A) 30 days
B) 16 days
C) 24 days
D) 18 days
E) 32 days

View Answer

Option A
Solution:
A and B in one day = 1/10 + 1/18 = 7/45 work
So in 3 days they did = 3 * 7/45 = 7/15 work
Remaining work = 1 – 7/15 = 8/15
Let C can complete work in x days. So
(1/18 + 1/x) * 6 = 8/15
Solve, x = 30 days

3. A is twice efficient than B who is one and a half times efficient than C. If C alone can complete a wok in 18 days, then in how many days, A, B and C together can complete 11/18 of work in how many days?
   A) 6 days
   B) 3 days
   C) 9 days
   D) 4 days
   E) 2 days

View Answer

Option E
Solution:
Efficiency ratio of A : B : C = 3x : 3x/2 : x = 6 : 3: 2
So ratio of no. of days of A : B : C is 1/6 : 1/3 : 1/2 = 1 : 2 : 3
Now C can complete work in 18 days, so
3 == 18
1 == 6
So A can complete work in 1 == 6 days and
B can complete work in 2 == 12 days
All together – 1/6 + 1/12 + 1/18 = 11/36 work in 1 day
So 11/18 work in 11/18 * 36/11 = 2 days

4. 20 men complete a work in 16 days and 25 women can complete the same work in 18 days. 8 men and 15 women started the work together. They worked for some number of days. After they left the work, 48 children joined the work and complete the work in 4 days. If efficiency of 1 man is double the efficiency of 1 child, how many days they took to complete the whole work?
   A) 12 days
   B) 16 days
   C) 9 days
   D) 20 days
   E) 15 days

View Answer

Option B
Solution:
20 m in 16 days, so 8 m in 20*16/8 = 40 days
25 w in 18 days, so 15 w in 25*18/15 = 30 days
They worked for some no. of days, so did (1/40 + 1/30)*x = 7x/120 work …… (1)
1 man can complete work in 20*16 = 320 days. So 1 child whose efficiency is half the man, can complete whole work in 320*2 = 640 days.
So 48 children in 640/48 days
They worked for 4 days, so did 4 * 48/640 = 3/10 of work
So remaining 7/10 was done by 8 men and 15 women….. (2)
From (1) and (2)
7x/120 = 7/10

x = 12 days
So total no. of days = 12+4 = 16 days

5. A camp was organized for 20 men. The food given to them can last for 40 days. After 25 days, 5 men left the camp. Find for how many more days, the remaining men can eat remaining food?
A) 10 days
B) 2 days
C) 6 days
D) 5 days
E) 8 days

View Answer

Option D
Solution:
After 25 days, food left for 20 men for 15 days. Now there are 15 men. So
20*15 = 15*x
Solve, x = 20 days
So extra days = 20-15 = 5 days

6. 25 kg of rice at Rs 20 per kg was mixed with some amount of rice at Rs 32 per kg. The whole mixture was sell at 20% profit for Rs 32.4 per kg. Find the amount of second variety of rice (priced at Rs 32 per kg).
A) 30 kg
B) 45 kg
C) 24 kg
D) 35 kg
E) 27 kg

View Answer

Option D
Solution:
SP = 32.4, profit = 20%, so CP = 100/120 * 32.4 = Rs 27
So by method of allegation:
(25 kg)…….(x kg)
20……..32
…….27
5……..7
5 == 25
1 == 5
7 == 35 kg

7. There are 2 mixtures which contains mixture of cereals A and B. Mixture 1 contains A and B in the ratio 4 : 5. Mixture 2 contains A and B in the ratio 8 : 3. Both the mixtures are mixed to form a third mixture. Now the ratio of A : B becomes 8 : 5 in the resultant mixture. If the resultant quantity if 364 kg of cereals, then find the amount of cereal B in

the mixture.
A) 130 kg
B) 150 kg
C) 180 kg
D) 240 kg
E) 220 kg

View Answer

Option E
Solution:
B in mixture 1 = 5/9, in mixture 2 = 3/11 and in resultant mixture = 5/13
So
5/9……..3/11
…….5/13
16/11*13…….20/9*13
36 : 55
So amount of cereal B in 364 kg = 55/91 * 364 = 220 kg

8. A 84 litres mixture contains A and B in ratio 3 : 4. 14 litres of this mixture is taken out and replaced by 10 litres of B. The resultant mixture will contain how much percent of A?
A) 52.2%
B) 46.7%
C) 67.5%
D) 23.4%
E) 37.5%

View Answer

Option E
Solution:
Total mixture = 84 l
So A in resultant mixture = 36 – 3/7 * 14 = 30 l
and B in resultant mixture = 48 – 4/7 * 14 + 10 = 50 l
So final ratio of A and B = 3 : 5
So % of A in final mixture = 3/8 * 100 = 37.5%

9. A mixture contains 4/5th part of alcohol and rest water. How much mixture should be taken out and replaced with water to make the ratio of alcohol to water reversible?
A) 3.45 l
B) 3.75 l
C) 4.25 l
D) 4.65 l
E) 5.35 l

View Answer

Option B

Solution:

Let total quantity = 5

So alcohol = 4, water = 1. so ratio = 4 : 1

Let mixture to be taken = x, and final ratio should be 1 : 4

So [4 – 4/5 * x]/ [1 – 1/5 * x + x] = ¼

Solve, x = 3.75l

10. There are 2 mixtures. Mixture P contains A, B and C in ratio 4 : 3 : 2. Mixture Q contains A and B in the ratio 1 : 4. If 4 litres of mixture P is mixed with 2 litres of mixture Q, then resultant mixture contains how much part of mixture C?

A) 1/27

B) 4/19

C) 2/31

D) 2/19

E) 1/23

View Answer

Option A

Solution:

C in 1st = 2/9, C in 2nd = 0

Total mixture = 4+2 = 6 l

So C in final mixture = (2/9)/6 = 1/27