

1. Direction: What should come in place of question mark (?) in the following questions?

3.4 × 85 ÷ 2.5 = ? - 4.4

114 122 **120** 116 None of these

Solution:

3.4 * 85/ 2.5

? - 4.4 = ? = 115.6 + 4.4 ? = 120

2. Direction: What value will come in place of the question mark (?) in the following question?

√676+241.56-128.87 +115.69

441

324

676



None of these

Solution: $\sqrt{676+241.56-128.87} + 115.69 = ?1/2$ 26+112.69+115.69 26+112.69-115.69 ?1/2 = 26-3 ?1/2 = 23On squaring both sides: ?=529

Hence, option D is correct.

3. Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine the relation between X and Y.

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1) x2 - 32 = 112

2) y - \sqrt{169} = 0

if x < y

if x \le y

if x = y or no relation can be established

if x > y

if x \ge y
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Solution:

1) X=12 2) Y=13



4. Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine the relation between X and Y.

I. $x + \sqrt{1369} = 0$ II. y2 - 1369 = 0 x > y $x \ge y$ x < y $x \le y$ $x \le y$

x = y or the relationship between x and y cannot be established.

Solution:

Quantity I:

$$x + \sqrt{1369} = 0$$

 $\Rightarrow x = -\sqrt{1369}$
 $\Rightarrow x = -37$
Quantity y:
 $y2 - 1369 = 0$
 $\Rightarrow y2 = 1369$
 $\Rightarrow y = \pm 37$
 $\Rightarrow y = 37, -37$
Now, comparing
 $-37 < 37$
 $-37 = -37$
Hence, $x \le y$



5. The perimeter of a rectangle is equal to the perimeter of a square and the side of the square is equal to the breadth of the rectangle. Find the ratio of the length of rectangle to the side of the square.

3: 12: 11: 1Cannot be determinedNone of these

Solution:

Let the length and breadth of the rectangle be 'l' and 'b' and side of square be 'a'. A.T.Q,

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2(l + b) = 4a
Side of square = Breadth of rectangle
a = b
So,
2(l + b) = 4a
2l + 2a = 4a
l = a
Required ratio = l : a
= a: a (l = a)
= 1: 1
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6. Total registered voters of a village is 6000. 70% male and 45% females are registered voter, if male is 2000 more than female then find the total population of the village.

10000 12000 8000 Cannot be determined 15000

Solution:

Let the total females be 'F', so male will be F + 2000 A.T.Q, 70% (F + 2000) + 45% of F = 6000 70% of F + 45% of F + 70% of 2000 = 6000 115% of F = 6000 - 1400 115% of F = 4600 F = 4000 Total females = 4000 Total females = 4000 + 2000 = 6000 Total population = male + female = 4000 + 6000 = 10000



7. A person invests Rs.1600 for 2 years and received the interest of Rs.704 at R% simple interest. If he invests the same amount at (R - 8)% for 2 years, find the interest.

Rs.442 Rs.434 Rs.424 Rs.448

None of these

Solution:

We know that, formula to calculate simple interest:

SI = $(p \times r \times t)/100$ (1600 × 2 × R) ÷ 100 = 704 3200 R = 70400 R = 22% New rate = R - 8 = 22 - 8 = 14% Interest = 1600 × 2 × 0.14 = Rs.448

8. Direction: What will come in place of question mark (?) in the given number series?

8, 14, 40, 138, 576, ?

2910



2920

2925 2930

Solution:

The pattern of the series is as follow × 1 + 6; × 2 + 12, × 3 + 18.... Hence the no. is $=576\times5+30=2910$

9. Direction: What will come in place of question mark (?) in the given number series?

27, 76, 272, 713, 1497, ?

2720

2721 2722

2723

2724

Solution:

The series is + 72+ 142, + 212, + ... Hence the no. is 1497+352=2722



10. Direction: What will come in place of question mark '?' in the given number series?

23, 312, 673, 1114, 1643, ?

2014

2160

2268 2304

2412

Solution:

The pattern of the series is as follows 23 + 172 = 312 312 + 192 = 673 673 + 212 = 1114 1114 + 232 = 16431643 + 252 = 2268

The number is 2268

11. Direction: What will come in place of question mark (?) in the given number series?

15, 115, 126, 270, 283, 479, ?

536



584 592 None of these

Solution:

The pattern of the series is as follows 102, + 11, + 122, + 13, + 142, + 15...

the number is 479+15= 494.

12. Direction: What will come in place of question mark (?) in the given number series?

339, 733, 1327, 2201, 3371, ?

4677

4757

4837

4917

5007

Solution:

73 - 4 = 339 93 + 4 = 733 113 - 4 = 1327 133 + 4 = 2201153 - 4 = 3371



173 + 4 = 4917

13. The sum of the two digits of a number is 15 and the difference between them is 3. What is the product of the two digits of the two-digit number?

56 63 42 Cannot be determined None of these

Solution:

Let the tens digit be x and ones digit be y. Therefore, the number = 10x + yAccording to given conditions, x + y = 15.... (i) and x - y = 3.... (ii)

Solving these equations, we get x = 9 and y = 6

Thus, the product of digits = $9 \times 6 = 54$

Hence, option (E) is correct.



14. Sum of eight consecutive numbers of Set A is 376. What is the sum of five consecutive numbers of another set if its minimum number is 15 ahead of average of Set A?

296 320

324

284

None of these

Solution:

Mean of Set A

376/8 =47

Lowest number of second set = 47 + 15 = 62 . Required sum = 62 + 63 + 64 + 65 + 66 = 320

15. The cost of 5 kg of apples is ₹450. The cost of 12 dozen mangoes is ₹ 4320 and the cost of 4 kg of oranges is ₹ 240. What is the total cost of 8 kg of apples, 8 dozens of mangoes and 8 kg of oranges ?

₹ 4020 ₹ 4080



₹ 4000 ₹ 4050 None of these

Solution:

The cost of 1 kg of apples = ₹90 The cost of 1 dozen of mangoes = ₹360 The cost of 1 kg of oranges = ₹60 Therefore, the total cost of 8 kg of apples, 8 dozen mangoes and 8 kg of oranges = ₹ (8 × 90 + 8 × 360 + 8 × 60) = ₹8 × (90+ 360 + 60) = ₹ 8 × 510 = ₹ 4080

Hence, option (B) is correct.

16. Arjun can row 75% of a distance of one kilometre against the stream in 14 ½ minutes and down the stream in 8 ¾ minutes. Then find the speed of Arjun in still water.

5 km/hr 4.12 km/hr 6.33 km/hr 4.85 km/hr 5.42 km/hr



Solution:

Let the distance be 1km = 1000 meters We can write three-quarters of a kilometre as 750 metres, 14 ½ minutes = 870 sec 8 ¾ minutes = 525 sec Rate upstream = (750/870) m/sec= (25/29) m/sec Downstream = (750/525) m/sec = (10/7) m/sec Therefore, speed in still water= ½(25/29 + 10/7) m/sec = ½(465/203) m/sec = (465/406) m/sec = (465/406 × 18/5) km/hr = 4.12 km/hr.

17. By selling 20 watches a trader earns a profit equal to the cost price of 30 watches. What is his profit percentage?

250% 300% 150% Insufficient data None of these

Solution:

Let c be the cost price and s be the selling price 20[sp-cp] =30cp (Sp-cp)/cp=3/2 Percentage profit = [3/2]*100=150%



18. Abhi, Baku and Laxa hires a garrage for Rs. 1460. Abhi keeps 10 Autorickshaw for 20 days, Baku 30 Auto rickshaw for 8 days and Laxa 16 Autorickshaw for 9 days. What rent is paid by each of them?

300, 400, 660 400, 360, 700 500, 600, 360 600,560, 300 200, 450, 350

Solution:

Abhi, Baku and Laxa paid rent in the ratio = (10x20): (30x8): (16x9) = 25:30:18 Rent paid by Abhi = Rs.(1460 x 25/73) = Rs. 500 Rent paid by Baku = Rs. (1460 x 30/73)= Rs. 600 Rent paid By Laxa = Rs. (1460 x 18/73) = Rs. 360

19. Average of 15 numbers is 12. Average of first 4 numbers is 9 and the average of last 9 numbers is 14. Find the average of 5th and 6th number.

5 6 7

8



Solution:

Sum of all 15 numbers = (15*12) = 180Sum of first 4 numbers = (4*9) = 36Sum of last 9 numbers = (9*14) = 126Hence, sum of 5th & 6th number = 180 - 36 - 126 = 18So, average of 5th & 6th number = 18/2 = 9

20. Direction: What value will come in place of the question mark (?) in the following question?

?% of 640 – 2³ = (7² - 12) + (10² - 17) 22 15 18 20 None

Solution:

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?% of 640 - 2^3 = (7^2 - 12) + (10^2 - 17)
?% of 640 - 8 = (49 - 12) + (100 - 17)
?% of 640 = 37 + 83 + 8
?= 128 \times \frac{100}{640}
?= = 20
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21. Direction: What should come in place of question mark(?) in the following question?

10% of 320 × ?% of 250 = 800

Solution:

10% of 320 × ?% of 250 = 800 ⇒ (10/100) × 320 × (?/100) × 250 = 800 ⇒ 32 × 2.5 × ? = 800 ⇒ ? = 10

22. Direction: What should come in place of question mark(?) in the following question?



Solution:

$$7140 \div 34 \div 10 = ?$$

$$\Rightarrow \frac{7140}{340} = ?$$

$$\Rightarrow ? = 21$$

23. Direction: What should come in place of question mark(?) in the following question?

(64)1.5× (16)2.5÷ (2)3.8 = (4)? 7.1 7.6 3.7 4.7 None of these

Solution:

 $(64)1.5 \times (16)2.5 \div (2)3.8 = (4)?$ $\Rightarrow 21.5 \times 6 \times 22.5 \times 4 \div 23.8 = 22 \times ?$ $\Rightarrow 2[(1.5 \times 6) + (2.5 \times 4) - 3.8] = 22 \times ?$ $\Rightarrow 29 + 10 - 3.8 = 22 \times ?$ $\Rightarrow 2 \times ? = 15.2$ $\Rightarrow ? = \frac{15.2}{2} = 7.6$

(24-28) Direction: Study the following table carefully and answer the questions given below:



Number of marks obtained by Five students in Five subjects in an examination

(Maximum marks in all the five subjects are 100)

24. The total marks obtained by D in English and History together was approximately what percentage of marks obtained by B in English?

150% 250% 175% 220% 100%

Solution:

⇒Total marks obtained by D in English and History: 93 + 80 = 173⇒Marks obtained by B in English = 80⇒Required percentage = $(173/80) \times 100 = 216.25\% \sim 220\%$

25. Marks obtained by D in Mathematics was approximately what percentage of marks obtained by C in English?

200% 33% 67% 167% 120%



Solution:

 \Rightarrow Marks obtained by D in Mathematics = 89

- \Rightarrow Marks obtained by C in English = 45
- \Rightarrow Required percentage = (89/45) ×100 ~ 200%

26. Who among them secured the highest total marks in English, Geography, and Science together?

B D E A C

Solution:

⇒Marks obtained in English, Geography and Science by: ⇒A =89 + 75 + 85 = 249 ⇒B =80 + 92 + 89 = 261 ⇒C =45 + 72 + 83 = 200 ⇒D =93 + 92 + 95 = **280** ⇒E =70 + 68 + 75 = 213

27. If the minimum pass percentage is 50 in each subject to be declared pass in the examination, how many of them failed in the examination?



4 1 None of these

Solution:

A scored 43 in Mathematics exam so he failed in the exam.
C scored 45 in English exam so he failed in the exam.
E scored 38 in Mathematics exam so he failed in the exam.
⇒Three students i.e. A, C and E failed in the exam.

28. Who among them secured minimum total percentage of marks?

B A E D C

Solution:

 $\Rightarrow A = 89 + 43 + 60 + 75 + 85 = 352$ $\Rightarrow B = 80 + 91 + 83 + 92 + 69 = 435$ $\Rightarrow C = 45 + 59 + 64 + 72 + 83 = 323$ $\Rightarrow D = 93 + 89 + 80 + 92 + 95 = 449$ $\Rightarrow E = 70 + 38 + 59 + 68 + 75 = 310$



29. 94 is divided into two parts in a way that one-fifth of the first & one-eighth of the second are in the ratio 3:4. The first part is:

27

30

36

48

None of these

Solution:

(1/5)a :(1/8)b= 3:4 => (1/5)a/(1/8)b=3/4 => 8a/5b=3/4 => a/b={3/4 x5/8}= 15/32 => First part ={94x15/47} =30.

30. Rs. 4000 was partly lent at 4% p.a. and partly at 6 % p.a. The total interest received after 3 years is Rs. 570. What is the amount lent at 4% SI?

Rs. 2400 Rs. 1600 Rs. 2500 Rs. 3000 None of these

Solution:

SI = $(p \times r \times t) / 100$ Let the amount lent at 4% SI be x.



Thus amount lent at 6% SI = 4000 - x $\frac{(x \times 4 \times 3)}{100} + \frac{(4000 - x) \times 6 \times 3}{100} = 570$ 12x/100 + 720 - 18x/100 = 570 6x = 15000 X = Rs. 2500

31. There are two pipes A & B which can fill a tank in 30 hours and 15 hours respectively. There is a leak as well. When these all 3 (pipes+leak) are active, they take 12 hours 30 minutes to fill the tank. Find the time in which the leak can empty the whole tank?

20 hours 30 hours 40 hours 50 hours 60 hours

Solution:

In one hour, A can fill 1/30th part. In one hour, B can fill 1/15th part. (1/30)+(1/15)-(1/x)=(1/12.5)(1/x) = (1/30)+(1/15)-(2/25)1/x = 0.02x=50

Hence, leak takes 50 hours in emptying the tank.



32. If there is 25% price hike in the price of a product which makes a person able to purchase 20 Kg less then the initial for Rs.400. What is the initial price?

4	
5	
6	
7	
9	

Solution:

 \rightarrow Since the price is rising by 25 % and the consumption is decreased by 20 %. And actual reduction in consumption by 20 Kg.

20% →20 Kg.

Original consumption is 100 Kg. and money spent is 400 then the original price is Rs.4

33. When Rs 250 added to 1/4th of a given amount of money makes it smaller than 1/3rd of the given amount of money by Rs 150. What is the given amount of money?

Rs 5075 Rs 3000 Rs 4800 Rs 4200 None of these



Solution:

Let the amount of money be x. Now x/4 + 250 = x/3 - 150x = 4800

34. Direction: In each of these questions a number series is given. In each series only one number is wrong. Find out that number.

79, 77, 81, 74, 89, 57, 121 121 81 57 74 77

Solution:

The series is 79 – 2 = 77, 77 + 4 = 81, 81 – 8 = 73, 73 + 16 = 89, 89 – 32 = 57, 57 + 64 = 121

35. Direction: In the following number series only one number is wrong. Find out the wrong number.

365, 337, 298, 246, 192, 120

337



298 120

365

Solution:

365 - (3 + 6 + 5) * 2 = 337337 - (3 + 3 + 7) * 3 = 298298 - (2 + 9 + 8) * 4 = 222222 - (2 + 2 + 2) * 5 = 192192 - (1 + 9 + 2) * 6 = 120

Hence, option (b) is the answer.

36. Direction: In the following number series only one number is wrong. Find out the wrong number.

18, 27, 40.5, 60.75, 90.125, 136.6875, 205.03125

60.75 18 40.5 90.125 27

Solution:

The series is 18 x 1.5 = 27, 27 x 1.5 = 40.5, 40.5 x 1.5 = 60.75, 60.75 x 1.5 = 91.125, 91.125 x 1.5 = 136.6875, 136.6875 x 1.5 = 205.03125



37. Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

 $3x^2 + 14x + 8 = 0$ $4y^2 - 11y + 6 = 0$ x > y x < y $x \ge y$ $x \le y$ $x \le y$ x = y or no relation can be established(CND)

Solution:

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3x2+14x+8=0
3x2+12x+2x+8=0
3x(x+4)+2(x+4)=0
(x+4)(3x+2)=0
x=-4 or x=-2/3
4y2-11y+6=0
4y2-8y-3y+6=0
4y(y-2)-3(y-2)=0
(y-2)(4y-3)=0
y= 3/4 or y=2
x<y
```



38. Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

4x2+8x+3=0 3y2+29y+56=0 x>y x<y x≥y x≤y x=y or no relation can be established(CND)

Solution:

```
4x2+8x+3=0

4x2+2x+6x+3=0

2x(2x+1)+3(2x+1)=0

(2x+1)(2x+3)=0

x=-1/2 or x=-3/2

x=-0.5 or x=-1.5

3y2+29y+56=0

3y2+21y+8y+56=0

3y(y+7)+8(y+7)=0

(y+7)(3y+8)=0

y=-7 or y=-8/3=-2.67

x>y
```



39. Direction: In the following question two equations are given in variables X and Y. You have to solve these equations and determine relation between X and Y.

x2 = 25 y2 - 1 = 8 X > Y X < Y $X \ge Y$ $X \le Y$ $X \le Y$ X = Y or No relation can be established

Solution:

x2= 25 x = 5, -5 y2 - 1 = 8 y2 = 9 y = 3,-3

No relation can be established

40. Direction: What value should come in place of the question mark (?) in the following question?

1990 - ? = 480 + 1360 160 140 150



190 None of these

Solution:

1990 - ? = 1840 ? = 1990 - 1840 = 150

Hence Option C is correct