Quiz Date: 15th February 2020

Directions (1 - 5): What will come in place of question mark (?) in the following number series?

Q1. 1, 2, 6, 33, 49, 174, ?
(a) 255
(b) 284
(c) 210
(d) 251
(e) 198

Q2. 1728, 1740, 1764, 1800, 1848, 1908, ?
(a) 1980
(b) 1988
(c) 2008
(d) 1976
(e) 1955

Q3. 4, 4, 9, 29, 119, 599,?
(a) 1242
(b) 1642
(c) 1824
(d) 3599
(e) 4023

Q4. 49, 47, 53, 41, 61, 31, ?
(a) 75
(b) 73
(c) 71
(d) 79
(e) 81

Q5. 80, 122, 168, 226, 288, 362, ?
(a) 420
(b) 440
(c) 480
(d) 460
(e) 520

Q6. If sum of 5 consecutive odd numbers is 425, so what will be the 4th number from the right end. if numbers is arranged in descending order?
(a) 89
(b) 79
(c) 81
(d) 83

(e) 87

Q7. If 6 years ago the ratio of ages of son and father is 2:17 and after 4 years from now the ratio will become 7:22. so, what is the current age of father?
(a) 30
(b) 34
(c) 40
(d) 42
(e) 45

Q8. Ram scored 80% marks in maths, 120 marks in English and 'X' marks in Science. if maximum marks of each subject are 200 and he scored 70% marks. Find the value of 'X'?
(a) 100
(b) 120
(c) 130
(d) 140
(e) 160

Q9. After giving the discount of 20% on marked price, seller gains the profit of 4%. what is marked price of article. If the cost price is Rs.500?
(a) 600
(b) 630
(c) 680
(d) 650
(e) 690

Q10. From a group of 6 men and 4 women. A committee of 5 people is to be formed having at least 3 men. Find the number of possible ways?
(a) 186
(b) 190
(c) 206
(d) 220
(e) 160

Q11. A boat running upstream takes 14 hours to cover a certain distance, while it takes 8 hours to cover the same distance running downstream. What is the ratio between speed of boat in still water to speed of water current?
(a)11:9
(b)11:3
(c)17:11
(d)13:7
(e)15:7

Q12. A boat covers a distance of 950 km downstream in 19 hour while it takes 25 hour to cover the same distance upstream. What is the speed of boat in still water (in kmph)?
(a)44
(b)35
(c)37
(d)48
(e)40

Q13. At simple interest, a sum becomes 3 times in 16 years. Find the time in which the sum will be 6 times at the same rate of interest.
(a)36 years
(b) 44 years
(c) 38 years
(d) 40 years
(e) 35 years

Q14. find the difference between simple interest and compound interest on Rs 12000 for $1\frac{1}{2}$ years at 10% per year but interest is calculated on half yearly basis.
(a)Rs 91
(b)Rs 91.5
(c)Rs 93.5
(d)Rs 95.5
(e)Rs 96

Q15. Mr. Ravi invested an amount of Rs 2500 divided into two different schemes A and B at the simple interest 14% per annum and 13% per annum respectively. If the total amount of simple interest earned in three years be Rs 1011, what was the amount invested in scheme B?
(a)Rs 1550
(b) Rs 1200
(c) Rs 1700
(d) Rs 1500
(e) Rs 1300

Solutions

S1. Ans. (c)
Sol.
$1+1^3 = 2$
$2+2^2 = 6$
$6+3^3 = 33$
$33+4^2 = 49$
$49+5^3 = 174$
So, $174+6^2 = 210$

S2. Ans. (a)
Sol.
1728+12=1740
1740+24=1764
1764+36=1800
1800+48=1848
1848+60=1908
So, 1908+72=1980

S3. Ans. (d)
Sol.
$4 \times 1 + 0 = 4$
$4 \times 2 + 1 = 9$
$9 \times 3 + 2 = 29$
$29 \times 4 + 3 = 119$
$119 \times 5 + 4 = 599$
$599 \times 6 + 5 = 3599$

S4. Ans. (b)
Sol.
49-(1× 2)=47
47+(2× 3)=53
53-(3×4)=41
41+(4×5)=61
61-(5×6)=31

So, 31+(6×7)=73

S5. Ans. (b)
Sol.
$9^2 - 1 = 80$
$11^2 + 1 = 121$
$13^2 - 1 = 168$
$15^2 + 1 = 226$
$17^2 - 1 = 288$
$19^2 + 1 = 362$
So, $21^2 - 1 = 440$

S6. Ans(e)
Sol. let the consecutive odd number be 2a+1, 2a+3 , 2a+5 , 2a+7, 2a+9 where n is any natural number.
$\therefore$ *according to question* 2a+1+2a+3+ 2a+5+ 2a+7+ 2a+9= 425
So a= 40 so numbers = 81,83,85,87,89
If we arrange the number in descending order so 4th from right will be = 87

S7. Ans(c)
Sol. let the age of son and father 6 years ago be 2x and 17x respectively
So according to queston
$\frac{2x+10}{17x+10} = \frac{7}{22}$
X= 2
So age of father 6 years ago = 17x= 34 years
Present age = 34 +6 = 40 years

S8. Ans(d)
Sol. marks in maths= $\frac{80}{100} \times 200 = 160$
Marks in English = 120

Total marks = $\frac{70}{100} \times 600 = 420$
$\therefore 160 + 120 + X = 420$
X= 140

S9. Ans(d)
Sol. as there is profit of 4% so, selling price = $\frac{104}{100} \times 500 = 520$
Let the marked price be x Rs
So, A.T.Q
80% of x = 520
So 100% of x = $\frac{520}{80} \times 100 = 650$

S10. Ans(a)
Sol. required number of ways= $({}^6C_3 \times {}^4C_2) + ({}^6C_4 \times {}^4C_1) + ({}^6C_5)$= 120+60+6 = 186

S11. Ans(b)
Sol.
Let speed of boat in still water and speed of water current be x kmph and y kmph respectively.
ATQ
$14(x - y) = 8(x + y)$
$14x - 14y = 8x + 8y$
$6x = 22y$
$\frac{x}{y} = \frac{11}{3}$
So, required ratio $= 11 : 3$

S12. Ans(a)
Sol.
Let speed of boat in still water = u km/h
And speed of current = v km/h
Downstream speed (u+v) = $\frac{950}{19}$
=50km/h
Upstream speed (u-v) = $\frac{950}{25}$
=38km/h
On solving
Speed of boat in still water (u) = 44km/h

S13. Ans(d)
Sol.
3 times in 16 years
So, interest will be 2 times of principal
Let principal=Rs. P
And rate = r%

$2p = \frac{p \times r \times 16}{100}$

R=$12\frac{1}{2}\%$

Let required time be t years.

So, $5p = \frac{p \times 12\frac{1}{2} \times t}{100}$

t = 40 years

S14. Ans.(b)

Sol. Since rate calculated half yearly

$$\left.\begin{aligned} \text{R} &= \frac{10}{2} = 5\ \% \\ \text{and time} &= \frac{3}{2} \times 2 = 3\ half\ \text{years} \end{aligned}\right\} \text{for C. I}$$

C.I-S.I = $12000\left[\left(1+\frac{5}{100}\right)^3 - 1\right] - \frac{12000 \times 10 \times 3}{100 \times 2}$

= 1891.5 – 1800

=Rs 91.5

S15. Ans.(e)

Sol. Let investment in scheme A = x Rs.

investment in scheme B = (2500- x) Rs.

$\frac{x \times 14 \times 3}{100} + \frac{(2500 - x) \times 13 \times 3)}{100} = 1011$

$\frac{3x}{100} = 36$

x = Rs.1200

Required sum = 2500-1200=Rs.1300

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