

Standard Questions Asked in CAT QA

Q. 1) For any natural numbers m , n , and k , such that k divides both $m + 2n$ and $3m + 4n$ k must be a common divisor of

- A. m and n
- B. $2m$ and $3n$
- C. $2m$ and n
- D. m and $2n$

Q. 2) Pipes A and C are fill pipes while Pipe B is a drain pipe of a tank. Pipe B empties the full tank in one hour less than the time taken by Pipe A to fill the empty tank. When pipes A, B and C are turned on together, the empty tank is filled in two hours. If pipes B and C are turned on together when the tank is empty and Pipe B is turned off after one hour, then Pipe C takes another one hour and 15 minutes to fill the remaining tank. If Pipe A can fill the empty tank in less than five hours, then the time taken, in minutes, by Pipe C to fill the empty tank is

- A. 75
- B. 120
- C. 60
- D. 90

Q. 3) In a company, 20% of the employees work in the manufacturing department. If the total salary obtained by all the manufacturing employees is one-sixth of the total salary obtained by all the 22 employees in the company, then the ratio of the average salary obtained by the manufacturing employees to the average salary obtained by the non-manufacturing employees is

- A. 6 : 5
- B. 4 : 5
- C. 5 : 4
- D. 5 : 6

Q. 4) Minu purchases a pair of sunglasses at Rs.1000 and sells to Kanu at 20% profit. Then, Kanu sells it back to Minu at a 20% loss. Finally, Minu sells the same pair of sunglasses to Tanu. If the total profit made by Minu from all her transactions is Rs.500, then the percentage of profit made by Minu when she sold the pair of sunglasses to Tanu is

- A. 26%
- B. 35.42%
- C. 52%
- D. 31.25%

Q. 5) If the area of a regular hexagon is equal to the area of an equilateral triangle of side 12 cm, then the length, (in cm), of each side of the hexagon is

[1] $2\sqrt{6}$

- [2] $4\sqrt{6}$
- [3] $\sqrt{6}$
- [4] $6\sqrt{6}$

Q. 6) Suppose the length of each side of a regular hexagon ABCDEF is 2 cm. If T is the midpoint of CD, then the length of AT, in cm, is

- [1] $\sqrt{15}$
- [2] $\sqrt{14}$
- [3] $\sqrt{13}$
- [4] $\sqrt{12}$

Q. 7) Anu, Vinu and Manu can complete a work alone in 15 days, 12 days and 20 days, respectively. Vinu works everyday. Anu works only on alternate days starting from the first day while Manu works only on alternate days starting from the second day. Then, the number of days needed to complete the work is

- [1] 7
- [2] 5
- [3] 8
- [4] 6

Q. 8) The natural numbers are divided into groups as (1), (2, 3, 4), (5, 6, 7, 8, 9), and soon. Then, the sum of the numbers in the 15th group is equal to

- [1] 7471
- [2] 6090
- [3] 4941
- [4] 6119

Q. 9) Anil borrows Rs 2 lakhs at an interest rate of 8% per annum, compounded half-yearly. He repays Rs 10320 at the end of the first year and closes the loan by paying the outstanding amount at the end of the third year. Then, the total interest, in rupees, paid over the three years is nearest to

- A. 33130
- B. 40991
- C. 51311
- D. 45311

Q. 10) In a rectangle ABCD, $AB = 9$ cm and $BC = 6$ cm. P and Q are two points on BC such that the areas of the figures ABP, APQ, and AQCD are in geometric progression. If the area of the figure AQCD is four times the area of triangle ABP, then $BP : PQ : QC$ is

- A. 1 : 1 : 2
- B. 1 : 2 : 1
- C. 1 : 2 : 4
- D. 2 : 4 : 1

Q. 11) In an examination, the average marks of 4 girls and 6 boys is 24 . Each of the girls has the same marks while each of the boys has the same marks. If the marks of any girl is at most double the marks of any boy, but not less than the marks of any boy, then the number of possible distinct integer values of the total marks of 2 girls and 6 boys is

- A. 20
- B. 22
- C. 21
- D. 19

Q. 12) The salaries of three friends Sita, Gita and Mita are initially in the ratio 5: 6: 7, respectively. In the first year, they get salary hikes of 20%, 25% and 20%, respectively. In the second year, Sita and Mita get salary hikes of 40% and 25%, respectively, and the salary of Gita becomes equal to the mean salary of the three friends. The salary hike of Gita in the second year is

- A. 28%
- B. 26%
- C. 30%
- D. 25%

Q. 14) A mixture P is formed by removing a certain amount of coffee from a coffee jar and replacing the same amount with cocoa powder. The same amount is again removed from mixture P and replaced with the same amount of cocoa powder to form a new mixture Q. If the ratio of coffee and cocoa in the mixture Q is 16: 9, then the ratio of cocoa in mixture P to that in mixture Q is

- A. 5 : 9
- B. 1 : 2
- C. 4 : 9
- D. 1 : 3

Q. 15) A quadrilateral ABCD is inscribed in a circle such that $AB:CD = 2:1$ and $BC:AD = 5:4$. If AC and BD intersect at the point E, then AE:CE equals

- A. 2 : 1
- B. 5 : 8
- C. 8 : 5
- D. 1 : 2

Q. 16) The number of all natural numbers up to 1000 with non-repeating digits is

- A. 648
 - B. 585
 - C. 504
 - D. 738
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