GS FOUNDATION

BATCH FOR CSE 2023

Ace CSAT 2023-Worksheet 4

Mathematisation and Linear Equations

1. You have a number. The number is subtracted by 7, next the result is divided by 5. If the final result is 11, what was the starting number?
   A. 52
   B. 62
   C. 57
   D. 77

2. The difference of the distances from Yash's and Wani's homes to their school divided by 2 is equal to twice the distance from Baba's home to the school. If Baba's and Wani's homes are at distances are 1 km and 2 km from school, respectively, find the distance between Yash's home and the school.
   A. 2 km
   B. 4 km
   C. 6 km
   D. Cannot be uniquely determined

3. Wani's and Yani's ages together are 27. If Yani is 9 years younger than Wani, how old is Wani?
   A. 14
   B. 17.5
   C. 18
   D. 19.5

4. The sum of distances of Tom's and Jerry's homes to the city center divided by 9 is equal to the distance of three times Udin's home to the city center. If Udin's and Jerry's home distances from city centre are 1 km and 7 km, respectively, find the distance between Tom's home and the city center.
   A. 8 km
   B. 12 km
   C. 15 km
   D. 20 km

5. Two friends Ram and Shyam go out to buy food. Ram buys pizza and a burger for Rs. 150. Shyam being more health conscious, buys Salad and Protein shake for Rs. 500. Had Ram bought Salad instead of burger, he would have to pay 150 more. And if he were to buy salad instead of pizza, he'd have to pay 100 more. How much does the protein shake costs in rupees?
   A. 150
   B. 200
   C. 250
   D. 300

6. A and B together have Rs. 470. If 4/3rd of A's amount is equal to 5/8th of B's amount, how much amount does B have?
   A. 256
   B. 235
   C. 300
   D. 320

7. Ram's age is twice that of his daughter's age. In 5 years, sum of their ages will be 85. What will be Ram's age after 20 years?
   A. 57
   B. 60
   C. 65
   D. 70

8. Sita travelled for 1500km to Srilanka with Ravana. Ram and Hanuman want to reach there along the same path. If Ram wants to reach there in 12 hours, what should be his speed?
   A. 100 kmph
   B. 80 kmph
   C. 150 kmph
   D. 100 kmph

9. 'A' wants to distribute 40 pens and some notebooks to his 4 children X, Y, Z and W. In total every child should receive half the number of notebooks than pens. X gets twice the number of pens as that of Y and 1/3rd that of Z. Total pens X and W receive is 12. How many notebooks does Z get?
   A. 4
   B. 6
   C. 8
   D. 12

10. Let p and q be three-digit numbers such that, q is obtained by reversing digits of p. Consider following statements:
    1. (p – q) is always divisible by 11
    2. (P + q) is always divisible by 37

    Which of the statements above is/are correct?
    A. 1 only
    B. 2 only
    C. Both 1 and 2
    D. Neither 1 nor 2

11. In an objective type test of 80 questions, 2.5 marks are allotted for every correct answer and 1/3rd marks are deducted for every wrong answer. After attempting all the 80 questions, a student got a total of 120 marks. What is the number of incorrect responses?
    A. 12
    B. 24
    C. 16
    D. 20

12. Two Statements S1 and S2 are given below with regard to two numbers followed by a Question:
    S1: Their product is 21.
    S2: 7 times their product is 147.
    Question: What are the two numbers?
    Which one of the following is correct in respect of the above Statements and the Question?
    A. S1 alone is sufficient to answer the Question.
    B. S2 alone is sufficient to answer the Question.
    C. S1 and S2 together are sufficient to answer the Question, but neither S1 alone nor S2 alone is sufficient to answer the Question.
    D. S1 and S2 together are not sufficient to answer the Question.

13. $1yy + 2yy + y0y + y4 + yy0 = 10yy$ for which digit does the y stand?
    A. 2
    B. 3
    C. 4
    D. 5

14. N ran for $(3x + 1)$ hours at constant speed $(2w + 7)$ and M ran at speed $(5w - 3)$ for $(9 - x)$ hours. What is the total distance they together cover?
    A. $51wx + 24x + 25w - 20$
    B. $xw + 16x + 47w - 10$
    C. $51xw + 16x - 25w + 10$
    D. $xw + 24x - 20 + 47w$

15. For a charity show, the total tickets sold were 630. Half of these tickets were sold at the rate of Rs. 7.5 each, one-third at the rate of Rs. 4.5 each and the rest for Rs. 3 each. What was the total amount received?
    A. Rs. 1350
    B. Rs. 2310
    C. Rs. 2415
    D. Rs. 3000

Solutions:

1. B
2. C
3. C
4. D
5. D
6. D
7. D
8. D
9. D
10. A
11. B
12. D
13. B
14. D
15. C