Linear Equations Mahayagya

20 Questions.. 20 Mins Test!

1. Ajosey buys some avocados. 2 are rotten. From remaining, 5/9 go to her fridge, rest to hostel fridge. She eats 2 and puts rest in hostel fridge. Max fridge capacity = 5. Find original number.
a) 9   b) 11   c) 14   d) 29   e) 20

2. Number of non-negative real roots of the equation $2^x - x - 1 = 0$
a) 1   b) 3   c) 2   d) 0   e) 4

3. Amreeshdar calculated 7/18 instead of 7/8 of a number. His answer was 770 less than the correct one. What was the number?
a) 1520   b) 1584   c) 1556   d) 1656   e) 1728

4. Datta purchased two oranges, three bananas and four apples for Rs. 15. Had he instead bought 3 oranges, 2 bananas, and 1 apple, it would have cost Rs. 10. If Datta bought 3 oranges, 3 bananas and 3 apples, how much did he pay?
a) Rs. 7.50 b) Rs. 12 c) Rs. 12.50 d) Rs. 15 e) Rs. 10

5. If $9^{(x - 1/2)} - 2^{(2x - 2)} = 4^x - 3^{(2x - 3)}$, then x is
a) 3/4   b) 2/3   c) 4/9   d) 3/5   e) 3/2

6. Raju got married 8years ago. His present age is 6/5 times his age at the time of his marriage. Raju's sister was 10 years younger than him at the time of his marriage. The present age of Raju's sister is?
1) 30 2) 35 3) 38 4) 36 5) 40 years

7. Which of the following is a factor of $x^3 - 19x + 30$?
1) x + 2 2) x + 1 3) x – 3 4) x – 1 5) x – 7

8. If x+1 is a factor of $2x^3 + ax^2 + 2bx + 1$: then find the values of a and b given that 2a - 3b = 4
1) 5, 3 2) 5, 2 3) 3, 4 4) 2, 7 5) 3, 6

9. There are two children named p and q . If it is known that the ages of p and q are in a ratio of 4:20. and the sum of their ages is 12 years. Find the age of q?
a) 5 b) 6 c) 4   d) 17 e) 10

10. A drum of kerosene is ¾ full. When 50 liters of kerosene is drawn from it, it remains 11/16 full, What is the capacity of the drum?
a) 900 b) 750 c) 800   d) 850 e) 875

11. Village P has a population of 78000 which is decreasing at the rate 1800 per year. Village Q has a population of 54000, which is increasing at the rate of 600 per year. in how many years will the population of the two villages be equal?

a) 14 b) 15   c) 10   d) 12   e) 13

12. A sum of Rs 8.75 is made up of 105 coins, which are of either 10 paise or 5 paise. How many 5 paise coins are there? a) 40   b) 38   c) 37   d) 39   e) 35

13. One year ago, promila was 4 times as old as her daughter sakshi. Six years hence, promila's age will exceed her daughter's age by 9 years. What is the ratio of present ages of promila and her daughter?
A. 9:2 B. 11:3 C. 12:5 D. 13:4 E. 9:4

14. The ratio between the present age of A and B is 5:3 respectively. The ratio between A's age 4 years age and B's age 4 years hence is 1:1. what is the ratio between A's age 4 years hence and B's age 4 years ago?
A. 1:3 B. 3:1 C. 2:1 D. 4:1 E. 1:1

15. In a group of buffaloes and ducks, the number of legs is 24 more than the twice number of heads. What is the number of buffalo in a group?
6 B. 8 C. 10 D. 12 E. 4

16. The price of the item X rises by Rs 40 per year and that of item Y by Rs 15 per year. If the price of item X and Y in the year 2002 was Rs 420 and Rs 630 respectively, in which year the price of item X will be Rs 40 more than the price of item Y?
A. 2010 B. 2011 C. 2012 D. 2013 E. 2014

17. The sum of the incomes of A and B is more than that of C and D taken together. The sum of the incomes of A and C is the same as that of B and D taken together. Moreover, A earns half as much as the sum of the incomes of B and D. If A's income be Rs 80,000 per annum and the difference between the incomes of B and D be the same as A's income, B's income is?
A. 40,000 B. 60,000 C. 80,000 D. 1,20,000 E. 20,000

18. The difference between the local value and the face value of 7 in the numeral 32675149 is?
A. 5149 B. 64851 C. 69993 D. 75142 E. 7000

19. Sujit and Suraj each have some money. If Sujit gives Rs. 10 to Suraj, then 4589 Suraj will have twice the money left with Sujit. But, if Suraj gives Rs. 10 to Sujit, then they both have an equal amount of money. How much money does Sujit have?
1)Rs 70   2) Rs 80   3) Rs 60   4) Rs 50   5) Rs 40

20. Identify the constant term to be added to $16a^2 - 12a$ to make it a perfect square.
a) 3/5 b) 6 c) 9/4 d) 7 e) 8/3