1.Find the smallest number that leaves a remainder of 4 on division by 5, 5 on division by 6, 6 on division by 7, 7 on division by 8 and 8 on division by 9? (TCS)

1. 2519
2. 5039
3. 1079
4. 979

Ans. 1

Hint LCM (a,b,c,d) + difference

2. The sum of the factors of a number is 124. What is the number? (Capegemini)

1. Number lies between 40 and 50
2. Number lies between 50 and 60
3. Number lies between 60 and 80
4. More than one such number exists

Ans 4

Hint : use the formula sum of product

3. What is the remainder when (13^{100} + 17^{100}) is divided by 25? (Capegemini)

1. 0
2. 2
3. 4
4. 11

Ans 2

Hint Use remainder theorem to find the ans

4. Which among the following is the smallest 7 digit number that is exactly divisible by 43? (Infosys)

1. 1000043
2. 1000008
3. 1000006
4. 1000002

Ans. 2

Hint Use divisibility rule

5. Krishna borrows Rs. 45K from a bank at 10% compound interet. He repays it in three annual installments that are in arithmetic progression. He ends up paying 54K totally. How much did he pay in year 1? (Capegemini)

1. Rs. 16,500
2. Rs. 19,500
3. Rs. 21,000
4. Rs. 18,000

Ans 2

Hint Amount outstanding at the end of Year 1 = (45000 × 1.1) – (18000 – d)

= 31500 + d

Amount outstanding at the end of Year 2 = ((31500 + d) * 1.1) – 18000

= 34650 + 1.1d – 18000 = 16650 + 1.1d

Amount outstanding at the end of Year 3 = ((16650 + 1.1d) * 1.1) = 18000 + d

18315 + 1.21d = 18000 + d

0.21d = – 315

d = –1500

The payments are Rs. 19500, Rs. 18000 and Rs. 16500

6. What will come in place of the question mark (?) in the following question ? (TCS)

52.5% of 800 + 30.5% of 2800 = ? + 87.30

1) 1096.30

2) 1226.70

3) 1124.20

4) 1186.70

Ans 4

Hint 52.5% of 800 + 30.5% of 2800 = x + 87.30

420 + 854 - 87.30 = x 1274 - 87.30 = x x = 1186.70

7. A trader mixes 26 kg of rice at Rs. 20 per kg with 30 kg of rice of other variety at Rs. 36 per kg and sells the mixture at Rs. 30 per kg. His profit percent is: (TCS)

1) No profit, no loss

2) 5%

3) 8%

4) 10%

Ans 2

Hint C.P. of 56 kg rice = Rs. (26 x 20 + 30 x 36) = Rs. (520 + 1080) = Rs. 1600.

S.P. of 56 kg rice = Rs. (56 x 30) = Rs. 1680. Gain =(80/1600*100) % = 5%

8. The number of oranges in three baskets are in the ratio of 3 : 4 : 5. In which ratio the no. of oranges in first two baskets must be increased so that the new ratio becomes 5 : 4 : 3? (Wipro)

1) 1:3

2) 2:1

3) 3:4

4) 2:3

Ans. 2

Hint basic ratio

9. A Contractor employed a certain number of workers to finish constructing a road in a certain scheduled time. Sometime later, when a part of work had been completed, he realised that the work would get delayed by three-fourth of the scheduled time, so he at once doubled the no of workers and thus he managed to finish the road on the scheduled time. How much work he had been completed, before increasing the number of workers? (Infosys)

1) 10 %

2) 14 (2/7)%

3) 20 %

4) Can't be determined

Ans. 2

Hint Let he initially employed x workers which works for D days and he estimated 100 days for the whole work and then he doubled the worker for (100-D) days.

D * x +(100- D) * 2x= 175x => D= 25 days

Now , the work done in 25 days = 25x

Total work = 175x

10. Tea worth of Rs. 135/kg & Rs. 126/kg are mixed with a third variety in the ratio 1: 1 : 2. If the mixture is worth Rs. 153 per kg, the price of the third variety per kg will be____? (Wipro)

1) Rs. 169.50

2) Rs.1700

3) Rs. 175.50

4) Rs. 180

Ans 3

Hint Since first second varieties are mixed in equal proportions, so their average price = Rs.(126+135)/2= Rs.130.50

So, Now the mixture is formed by mixing two varieties, one at Rs. 130.50 per kg and the other at say Rs. 'x' per kg in the ratio 2 : 2, i.e., 1 : 1. We have to find 'x'.

Cost of 1 kg tea of 1st kind Cost of 1 kg tea of 2nd kind

11. The speed of a car increases by 2 kms after every one hour. If the distance travelling in the first one hour was 35 kms. what was the total distance travelled in 12 hours? (TCS)

1) 456 kms

2) 482 kms

3) 552 kms

4) 556 kms

Ans 3

Hint Total distance travelled in 12 hours =(35+37+39+.....upto 12 terms)

This is an A.P with first term, a=35, number of terms,

n= 12,d=2.

12. Pipes A, B and C can fill a tank in 30, 60 and 120 minutes respectively. Pipes B and C are kept open for 10 minutes, and then Pipe B is shut while Pipe A is opened. Pipe C is closed 10 minutes before the tank overflows. How long does it take to fill the tank? (Capegemini)

1. 40 minutes
2. 28 minutes
3. 30 minutes
4. 36 minutes

Ans 3

Hint Let us assume that the tank has a capacity of 120 litres. So, the pipes discharge the following amounts of water:

(A) 4 litres per minute

(B) 2 litres per minute

(C) 1 litre per minute.

Part 1: B and C (3 litres/min) are kept open for 10 minutes, filling 3 × 10 = 30 litres. 90 litres remain to be filled in the tank.

Part 2: Now, B is shut and A is opened. Effectively, this means that A and C are filling the tank together (5 litres / minute). We don't yet know how long A and C are open together.

Part 3: C is closed 10 minutes before the tank overflows. This means that only A works for the last 10 minutes, filling 40 litres (working@4 litres/min)

Since 30 litres are filled in Part 1 and 40 litres in Part 3, the balance (50 litres) should have been filled in Part 2.

Working together, A and C fill 5 litres per minute in Part 2. This means that they would have taken 10 minutes to fill 50 litres.

So, the entire time it took to fill the tank is:

10 + 10 + 10 = 30 mins.

13. Two horses start trotting towards each other, one from A to B and another from B to A. They cross each other after one hour and the first horse reaches B, 5/6 hour before the second horse reaches A. If the distance between A and B is 50 km. what is the speed of the slower horse? (Wipro)

1) 30 km/h

2) 15 km/h

3) 25 km/h

4) 20 km/h

Ans 4

Hint Basic TSD formula

14. If the cost price of 12 pens is equal to the selling price of 8 pens, the gain percent is ? (Tech Mahindra)

1) 12%

2) 30%

3) 50%

4) 60%

Ans. 3

Hint

Let the cost price of 1 pen is Re 1 Cost of 8 pens = Rs 8 Selling price of 8 pens = 12

Gain = 12 - 8 = 4

15. POINT + ZERO = ENERGY, Find E+N+E+R+G+Y (Infosys)

1.17

2.13

3.18

4.19

Ans 1

Hint Basic crypt rules