1. A^B means A raised to the power B. If f(x) = ax^4  – bx^2 + x + 5 and f(-3) = 2, then f(3) = ?  
   a. 3 b. 8 c. -2 d. 1
2. 1/4 of the tank contains fuel. When 11 liters of the fuel is poured into the tank, the indicator rests at the 1/2 mark. Find the capacity of the tank in liters.

a. 44 b. 36 c. 6 d. 8

1. You have been given a physical balance and 7 weights of 47, 46, 43, 48, 49, 42, and 77 kgs. Keeping weights on one pan and object on the other, what is the maximum you can weigh less than 178 kgs.

a. 172 b. 174 c. 175 d. 177

1. How many 6-digit even numbers can be formed from the digits 1, 2, 3, 4, 5, 6 and 7 so that the digits should not repeat and the second last digit is even?

a. 320 b. 6480 c. 2160 d. 720

1. Out of a group of swans, 7/2 times the square root of the total number are playing on the shore of the pond. The remaining 2 are inside the pond. Find the total number of swans.

a. 16 b. 25 c. 4 d. 9

1. In a village, every weekend, three-eighth of the men and one-third of the women participate in a social activity. If the total number of participants is 54, and out of them 18 are men then the total number of men and women in the village is:

a. 180 b. 156 c. 204 d. 228

1. If M is 30% of Q, Q is 20% of P, and N is 50% of P, then M/N = ?

a. 6/5 b. 4/3 c. 3/25 d. 3/250

1. There are 20 persons among whom two are sisters. Find the number of ways in which we can arrange them around a circle so that there is exactly one person between two sisters? Please note that the exact position on the circle does not matter (no seat numbers are marked on the circle), and only the relative positions of the people matter.

a. 2! \* 19! b. None of these c. 2 \* 18! d. 18!

1. Find the length of the longest pole that can be placed in an indoor stadium 24m long, 18m wide and 16m high.

a. 36m b. 34m c. 30m d. 25m

1. Of a set of 30 numbers, the average of first 10 numbers is equal to the average of last 20 numbers. Then the sum of the last 20 numbers is:

a. Sum of first ten numbers b. 2 X sum of the first ten numbers  
c. Cannot be determined with the given data d. 2 x sum of last ten numbers

1. Thomas takes 7 days to paint a house completely whereas Raj would require 9 days to paint the same house completely. How many days will it take to paint the house if both of them work together (give answers to the nearest integer)?

a. 4 days b. 2 days c. 5 days d. 3 days

1. The University of Vikramasila has enrolled nine Ph.D. candidates: Babu, Chitra, Dheeraj, Eesha, Farooq, Gowri, Hameed, Iqbal, Jacob.

– Farooq and Iqbal were enrolled on the same day as each other, and no one else was enrolled that day.  
– Chitra and Gowri were enrolled on the same day as each other, and no one else was enrolled that day.  
– On each of the other days of hiring, exactly one candidate was enrolled.  
– Eesha was enrolled before Babu.  
– Hameed was enrolled before Dheeraj.  
– Dheeraj was enrolled after Iqbal but before Eesha.  
– Gowri was enrolled after both Jacob and Babu.  
– Babu was enrolled before Jacob.

Who were the last two candidates to be enrolled?

a. Eesha and Jacob b. Babu and Chitra  
c. Gowri and Chitra d. Babu and Gowri

1. In a certain city, 60 percent of the registered voters are Party A supporters and the rest are Party B supporters. In an assembly election, if 75% of the registered Party A supporters and 20% of the registered Party B supporters are expected to vote for Candidate A, what percent of the registered voters are expected to vote for Candidate A?

a. 20 b. 60 c. 75 d. 53

1. A number when successively divided by 5, 3, 2 gives the remainder of 0, 2 and 1 respectively in that order. What will be the remainders when the same number is divided successively by 2, 3 and 5 in that order?

a. 4, 1, 2 b. 1, 0, 4 c. 2, 1, 3 d. 4, 3, 2

1. ) Professor Nitwit obtains a hash number of a given positive integer > 3 as follows. He subtracts 2 from the number (to get the new number), and multiplies the new number by 2 to get a term. He repeats this with the new number (to get newer numbers and terms) until the number becomes 2 or 1. The hash is defined as the sum of all the terms generated in this process.

For example, with the number 5, he multiplies (5-2 =3) by 2 to get the first term 6. He multiplies (3-2=1) by 2 to get the second term 2.  As the number has become 1, he stops. The hash is the sum of the two terms (6+2) or 8.

If professor Nitwit is given 3 numbers 4, 9 and 13, what is the sum of the hash numbers he obtains for the three numbers?

a.107 b.106 c.108 d.109