20.09.2020 FN SESSION

1. 7 members have to be selected from 12 men and 3 women, Such that no two women can come together. In how many ways we can select them?

12 Men & 3 Women

Team of 7 members

6 Men & 1 Women (or) 7 Men

12C6 \* 3C1  + 12C7 = (12 \* 11 \* 2 \* 3 \* 7 ) \* 3 +

2. If a, b, c are positive real number then least value of (a + b + c) (1/a + 1/b + 1/c):

AM >=GM

(a + b + c) / 3 >= (abc)1/3

1/3 \* (a + b + c) >= (abc)1/3

1/3 \* (1/a + 1/b + 1/c) >= (1/a\*1/b\*1/c)1/3

1/3 \* (1/a + 1/b + 1/c) >= (1/abc)1/3

1/3 \* (1/a + 1/b + 1/c) (a + b + c) / 3 >= (abc)1/3\* 1 / (abc)1/3

1/9 \* (1/a + 1/b + 1/c) (a + b + c) > = 1

(1/a + 1/b + 1/c) (a + b + c) >= 9