**C5\_SPRINT\_2\_PRACTICE\_BRIEF**:

**TASK 1**

**Answer:**

\*3 men and 2 women

6c3 \* 4c2=6\*5\*4\*3! / 3\*2 \*3! \* 4\*3\*2! / 2! \* 2 = 120

\*men only :-

6c5 = 6 \* 5! /5! (6-5)! = 6

\*majority of women:-

6c1 \*4c4= 6! / 1 \* (6-1)! \* 4!/ 4!(4-4)!= 6

Therefore;

6c2 \* 4c3 =6!/2!(6-2)! \* 4!/3!(4-3)!15\*4 =60=60+6 = 66

**TASK 2**

**Answer:**

52c5= 52\*51\*50\*49…..\*1/5\*4\*3\*2\*1(47)!= 25,98,960

**TASK 3**

**Answer:**

8c1 \* 7c1 \*6c1=8!/1!(8-1)! \* 7!/1!(7-1)! \* 6!/1!(6-1)!= 8\*7\*6=336

OPTION 2 : 336

**TASK 4**

**Answer:**

So here, the total number of ways 15 students can be arranged are as follows:

13 students + 1 = 14

Here “1” refers to Jenny and David!

Changes of being together = 14! \* 2!

So……………15! \* 14! \* 2! = 1133317785600

**TASK 5**

**Answer:**

Total outcomes = 36

Possible outcomes by rolling 2 dices = [(1,3),(3,1),(2,6),(6,2)]

Probability = 4 /36

Result : 1/9

**TASK 6**

**Answer:**

Consonants are 7

Vowels are 4

Possibility of making a word with 3 consunants and 2 vowel:

7c3 \* 4c2 \*5! =

7\*6\*5\*4! / 3\*2(4!) \* 4\*3\*2/2(2!) \* 5! = 25,200

*(this 5! is again the word possibility within the 3 consunants and 2 vowels)*

**TASK 7**

**Answer:**

Members are 12

Ava being a member already so,12-1=11

Committee is consists of 5 members so,selecting the members is as follows :

11C4

11\*10\*9\*8\*7! / 4\*3\*2(7!)=330

**TASK 8**

**Answer:**

Total bulbs are 25\*

Defective bulb are 25% means 6 bulbs are there.

Out of 6 bulbs, 1 Good bulb is drawn!

Remaining ‘24’

So;

25-1=24

Out of good bulbs Good bulbs 24-6=18

Possibilty of drawing a good bulb is 18 of 24 i.e 18/24

**TASK 9**

**Answer:**

1. 50/150 = 1/3 ( #When van leaves first………. )

(b.) 20/150 = 2/15 ( #When lorry leaves first………. )

🡪 Possibilties of car leaving at second place are…..

50/150 \* 80/149 + 20/150 \* 80/149

= 8/447 + 32/447

=40/447

=0.089

**TASK 10**

**Answer:**

Overall frequency is 30

In a class, possibilities of having 2 left-handed students are,

LHS / overall frequency = 8 / 30 = 4/15

In a class, possibilities of having atleast 3 left-handed students are

LHS( atleast-3 left handed students)/overall frequency = 19/30

**TASK 11**

**Answer:**

As, Side of a square is 2\*s,

Base and height of triangle is s,

Area of a square is 4s\*4s  
& Area of a Triangle is 1/2\*b\*h  
Possibilities of a triangle can be calculated as  
 Area of a Triangle / Area of a Square = 1/2\*x\*x/4\*x\*x = 1/8

**TASK 12**

**Answer:**

Overall outcomes are 6\*6 = 36  
equal to(=) 1 = P(1) = 0  
equal to(=) 4 = 4/36 = 1/9

Less than(<) 13 = 1

So therefore, less than 13 outcomes are resulted by aggregation!

**TASK 13**

**Answer:**

🡪total of 10 even numbers b/w 1-20[EVEN NUMBERS]

Even numbers/To

tal number = 10 / 20 = ½

🡪Total of 6 numbers divisible by 3 b/w 1-20 [ODD NUMBERS]

6/20= 3/10

🡪Total of 8 prime numbers b/w 1-20

8/20= 4/10 =2/5

🡪Total of 4 numbers divisible by 5 b/w 1-20

4/20=2/10=1/5

**TASK 14**

**Answer:**

Overall outcome of 1 dice when rolled is 6

If 3 dice rolled = 6\*\*3(6 to the power 3) = 216

Possibility of 11 (when 3 dice rolled) : p(11)-27/(6\*6\*6)= 0.125

Possibility of 11 (when 3 dice rolled) : P(12)-25/(6\*6\*6)= 0.115

Thus p(11)>p(12).

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