

PAS-PT-1
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BTECH CSE 4B
2K19CSUN01082

Q-1 How many chords can be drawn through 17 points on a circle?

CODE:

```
1 clc
2 n = input("Enter the number of points in a circle: ");
3 r = 2;
4
5 c = factorial(n)/(factorial(r) * factorial(n-r));
6 printf("No. of chords passing through these points: %.2f\n", c)
```

OUTPUT:

```
Enter the number of points in a circle: > 17
r = 2
ans =
{
    [1,1] = 1
}
ans =
{
    [1,1] = 2
}
ans =
{
    [1,1] = 6
}
ans =
{
    [1,1] = 24
}
ans =
{
    [1,1] = 120
}
ans =
{
    [1,1] = 720
}
```

```
ans =
{
    [1,1] = 720
}
ans =
{
    [1,1] = 5040
}
ans =
{
    [1,1] = 40320
}
ans =
{
    [1,1] = 362880
}
ans =
{
    [1,1] = 3628800
}
ans =
{
    [1,1] = 3.9917e+07
}
ans =
{
    [1,1] = 4.7900e+08
}
```

```
ans =  
{  
  [1,1] = 6.2270e+09  
}
```

```
ans =  
{  
  [1,1] = 8.7178e+10  
}
```

```
ans =  
{  
  [1,1] = 1.3077e+12  
}
```

```
ans =  
{  
  [1,1] = 2.0923e+13  
}
```

```
ans =  
{  
  [1,1] = 3.5569e+14  
}
```

```
ans =  
{  
  [1,1] = 1  
}
```

```
ans =  
{  
  [1,1] = 2
```

```
{  
  [1,1] = 1  
}
```

```
ans =  
{  
  [1,1] = 2  
}
```

```
ans =  
{  
  [1,1] = 1  
}
```

```
ans =  
{  
  [1,1] = 2  
}
```

```
ans =  
{  
  [1,1] = 6  
}
```

```
ans =  
{  
  [1,1] = 24  
}
```

```
ans =  
{  
  [1,1] = 120  
}
```

```
ans =  
{  
  [1,1] = 720  
}
```

```
ans =  
{  
  [1,1] = 5040  
}
```

```
ans =  
{  
  [1,1] = 40320  
}
```

```
ans =  
{  
  [1,1] = 362880  
}
```

```
ans =  
{  
  [1,1] = 3628800  
}
```

```
ans =  
{  
  [1,1] = 3.9917e+07  
}
```

```
ans =  
{  
  [1,1] = 4.7900e+08  
}
```

```
ans =  
{  
  [1,1] = 8.7178e+10  
}
```

```
ans =  
{  
  [1,1] = 1.3077e+12  
}
```

No. of chords passing through these points: 136.00

Q-2

The probability that a man aged 35 years will die before reaching 40 years may be taken 0.018. Out of a group of 400 men, now aged 35 years, what is the probability that 2 men will die within the next 5 years?

B4				
fx =POISSON(2,B3,FALSE)				
	A	B	C	D
1	n	400		
2	p	0.018		
3	Mean	7.2		
4	Probability that 2 men will die	0.019351504		
5				

Q-3

Find probability of each element (row wise) of a Null matrix of order 8.

CODE:

```

1 A = [0,0,0;0,0,0;0,0,0]
2
3 [r, c] = size(A)
4 y = zeros(r,c)
5 p = zeros(r,c)
6 for i = 1:r
7     for j = 1:c
8         y(i,j) = sum(A([i],:) == A(i, j))
9         p(i,j) = y(i,j)/c
10    endfor
11 endfor

r = 3
c = 3
y =

    0    0    0
    0    0    0
    0    0    0

p =

    0    0    0
    0    0    0
    0    0    0

y =

    3    0    0
    0    0    0
    0    0    0

p =

    1    0    0
    0    0    0
    0    0    0

```

OUTPUT:

```

y =

    3    3    0
    0    0    0
    0    0    0

```

```

p =

    1    1    0
    0    0    0
    0    0    0

```

```

y =

    3    3    3
    0    0    0
    0    0    0

```

```

p =

    1    1    1
    0    0    0
    0    0    0

```

```

y =

    3    3    3
    3    0    0
    0    0    0

```

```

p =

    1    1    1
    1    0    0
    0    0    0

```

Q-4

Fit a Binomial Distribution to the following data: X: 0 1 2 3 4 F: 30 62 46 10 2

B13 fx =BINOM.DIST(1,4,B10,FALSE)					
	A	B	C	D	E
8					
9	Mean	1.28			
10	p	0.32			
11	q	0.68			
12	Expected frequency(x=0)	0.21381376			
13	Expected frequency(x=1)	0.40247296			
14	Expected frequency(x=2)	0.28409856			
15	Expected frequency(x=3)	0.08912896			
16	Expected frequency(x=4)	0.01048576			
17					
18					

