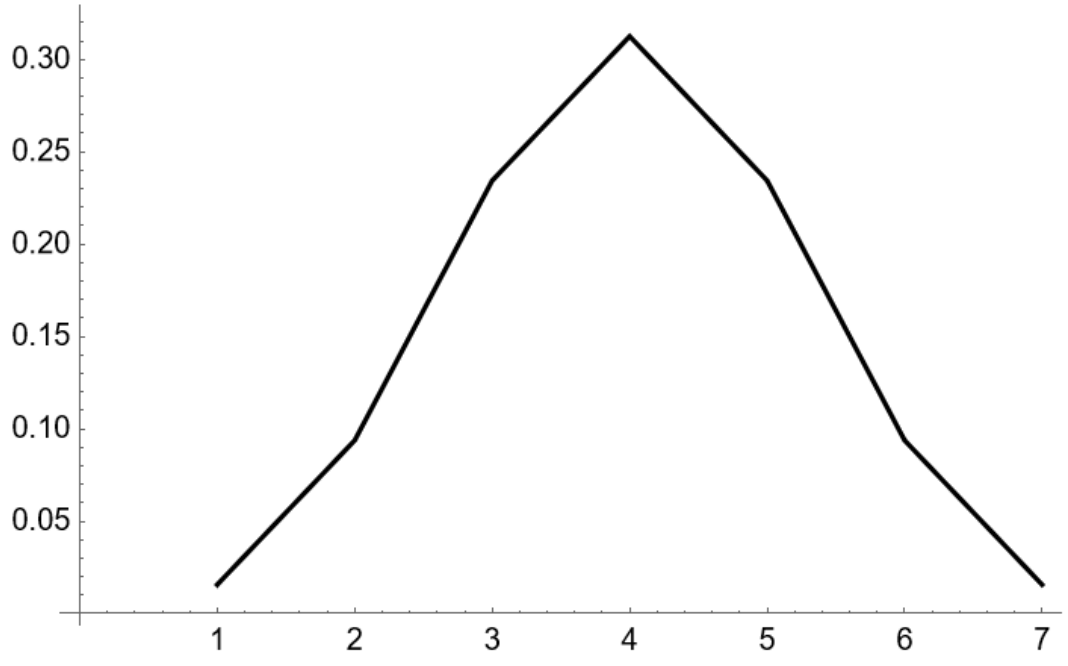
Friday, May 27, 2022 3:07 PM

2.1) a) 1) 1
2) 5
3) 20
4) 60
5) 120
6) 120

b) 1) 1
2) 5
3) 10
4) 10
5) 5
6) 1

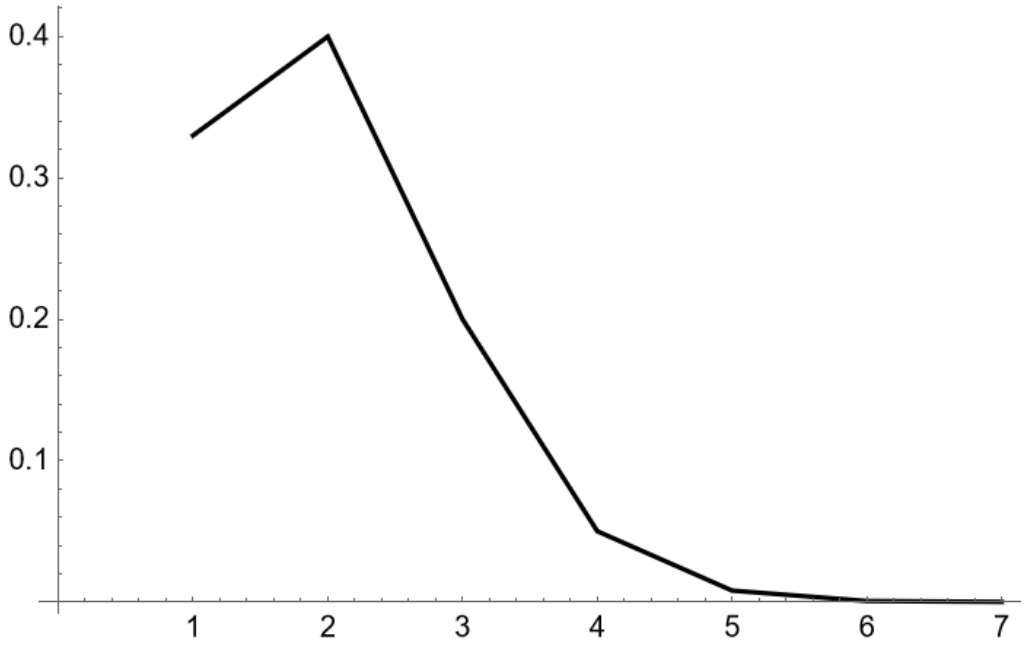
2.3) $P(x; n, p) = \frac{n!}{x!(n-x)!} p^x q^{n-x}$

$P(0 \to 6, 6, 1/2) =$
- $x=0: \frac{1}{64}$
- $x=1: 3/32$
- $x=2: 15/64$
- $x=3: 5/16$
- $x=4: 15/64$
- $x=5: 3/32$
- $x=6: 1/64$

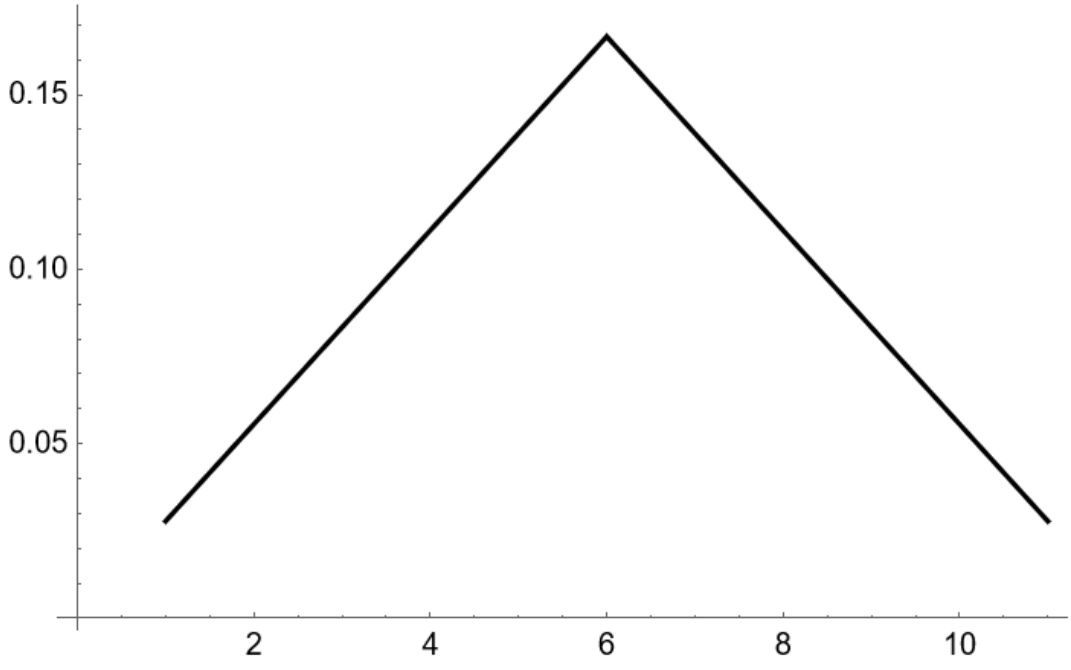


$P(0 \to 6, 6, 1/6) =$

- $x = 0$: 0.33
- $x = 1$: 0.40
- $x = 2$: 0.20
- $x = 3$: 0.05
- $x = 4$: 0.006
- $x = 5$: 0.0006
- $x = 6$: 0.00002



2.4)



Using Mathematica,

the mean is $\frac{1}{11}$

Median: $\frac{1}{12}$

STD: $\frac{\sqrt{\frac{31}{11}}}{36} \approx 0.05$