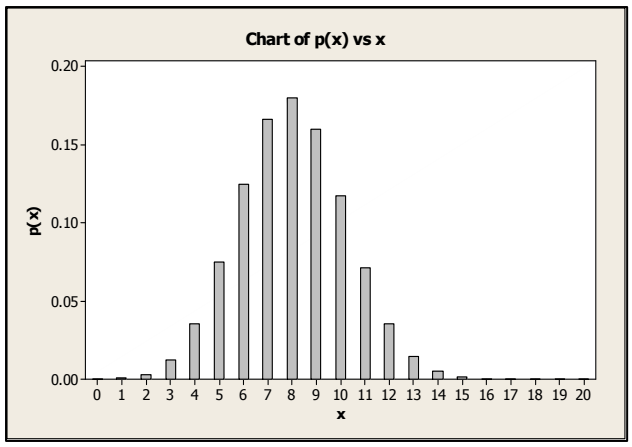
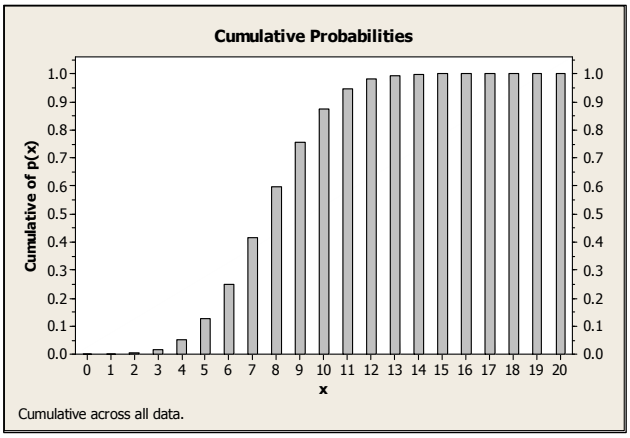
MINITAB and Binomial Random Variables – An Example

Consider a binomial distribution with n = 20 and p = 0.40.

Worksheet 1 ***

	C1	C2	C3	C4	C5	C6	C7
	x	p(x)	xp(x)	mean	[(x - mean)^2*p(x)]	variance	standard deviation
1	0	0.000037	0.00000	8	0.002340	4.8	2.19089
2	1	0.000487	0.00049		0.023887		
3	2	0.003087	0.00617		0.111147		
4	3	0.012350	0.03705		0.308742		
5	4	0.034991	0.13996		0.559853		
6	5	0.074647	0.37324		0.671823		
7	6	0.124412	0.74647		0.497647		
8	7	0.165882	1.16118		0.165882		
9	8	0.179706	1.43765		0.000000		
10	9	0.159738	1.43765		0.159738		
11	10	0.117142	1.17142		0.468566		
12	11	0.070995	0.78094		0.638954		
13	12	0.035497	0.42597		0.567959		
14	13	0.014563	0.18932		0.364076		
15	14	0.004854	0.06796		0.174757		
16	15	0.001294	0.01942		0.063430		
17	16	0.000270	0.00431		0.017260		
18	17	0.000042	0.00072		0.003427		
19	18	0.000005	0.00008		0.000470		
20	19	0.000000	0.00001		0.000040		
21	20	0.000000	0.00000		0.000002		





P(5.81 ≤ x ≤ 10.19) = _____

P(3.62 ≤ x ≤ 12.38) = _____