

Distribution: **B (10, .5)**

$$\mu = 5.00$$

$$\sigma = 1.58$$

STEP 1: Define the Random Variable (done):

X=The number of defective light bulbs

STEP 2: Define your binomial distribution in the heading

STEP 3: Calculate $P(X)$, the expected value (the mean), the variance, and st deviation by completing the following table (round to values in the 4 decimals and the final parameters to 2 decimals.)

X	p_i	$x_i * p_i$	$(x_i - \mu)^2 * p_i$
0	0.0010	0.0000	0.0250
1	0.0098	0.0098	0.1568
2	0.0439	0.0878	0.3952
3	0.1172	0.3516	0.4690
4	0.2051	0.8204	0.2053
5	0.2461	1.2305	0.0000
6	0.2051	1.2306	0.2049
7	0.1172	0.8204	0.4686
8	0.0439	0.3512	0.3950
9	0.0098	0.0882	0.1568
10	0.0010	0.0100	0.0250
Σ	1.0001	5.0005	2.5016

$$E(X) = \mu = 5.00$$

$$VAR(X) = \sigma^2 = 2.50$$

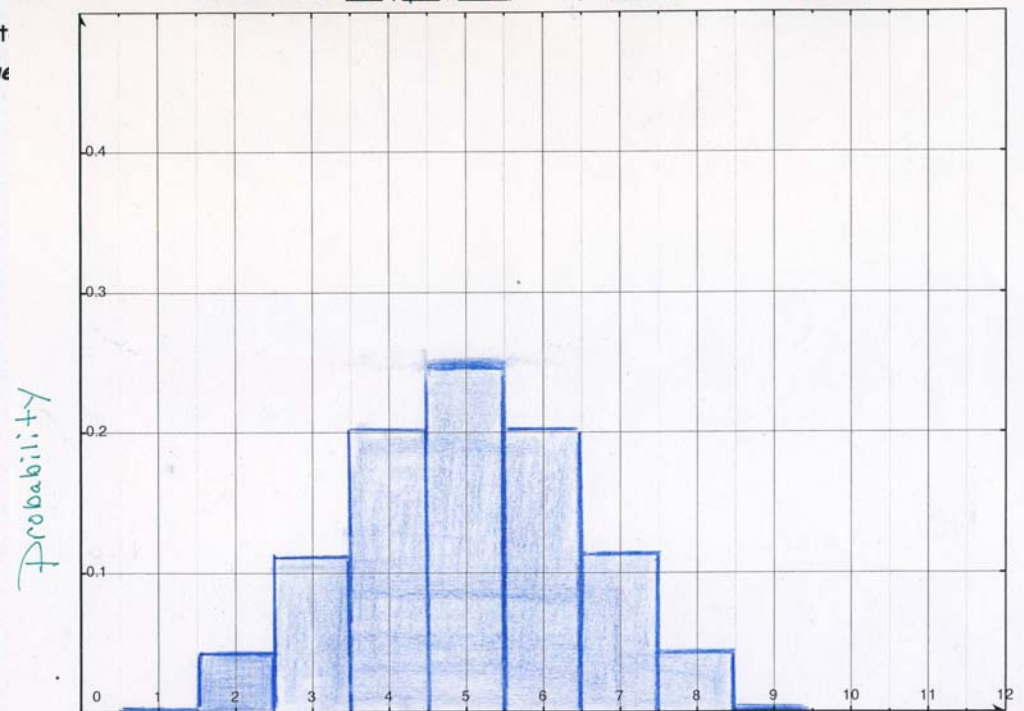
$$\sigma = 1.58$$

STEP 4: Create a Histogram. It must be presentation quality.

Label the axes and complete the title.

Name:

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