

Mean and SD of Binomial

Mean number of successes: $\mu = np$

Standard Deviation: $\sigma = \sqrt{n(p)(1-p)}$

For example 1 above on the probability of relief from allergies with $n=10$ trials and $p=0.80$ probability of success in each:

$$\mu = np = (10)(0.80) = 8$$

$$\sigma = \sqrt{n(p)(1-p)} = \sqrt{10(0.8)(0.2)} = 1.3$$