With Kerrich's Quarter,

S = heads, $p = P(S) = .51$

$q = 1 - p = .49$

What is the probability of getting 2 heads in 4 tosses.

($x = 2$, $n = 4$)

$P(2 \text{ successes}) = P(x = 2)$

$= {}_nC_x \, p^x q^{n-x} = {}_4C_2 \cdot .51^2 \cdot .49^{4-2}$

$= 6 \cdot 0.51^2 \cdot 0.49^2$

$= .375$

You can generate the entire probability distribution on your calculator:

(table)

x	P(x)
0	.058
1	.240
2	.375
3	.260
4	.068

Mean

$\mu = 2.04 = 4 \cdot 0.51$

$= np$

Std dev. (has rounding error)

$\sigma = 1.0007 \approx \sqrt{npq}$

For Binomial Experiments ONLY

The mean of x values is

$\mu = E(x) = n \cdot p$.

Std. Dev. $\sigma = \sqrt{npq}$

Better

$\sigma = \sqrt{4 \cdot .51 \cdot .49}$

$= 1.000$.

Variance $\text{Var}(x) = \sigma^2 = npq$