1. $0.58 \times 0.76 = 0.441$
2. $P(X \geq 1) = 1 - P(X = 0) = 1 - 0.47^2 = 0.779$
3. $P(X = 2) = \text{binompdf}(3,0.81,2) = 0.374$
4. $P(X = 3) = \text{geometpdf}(0.63,3) = 0.0862$
5. $P(X \leq 3) = \text{binomcdf}(5,0.72,3) = 0.430$
6. $P(x \leq 4) = \text{geometcdf}(0.83,4) = 0.999$
7. $P(X = 4) = \text{binompdf}(7,0.23,4) = 0.0447$
8. $\mu = np = 8(0.38) = 3.04$
9. $\mu = 1/p = 1/0.18 = 5.56$
10. $P(X > 6) = 1 - \text{geometcdf}(0.24,6) = 0.193$
11. $P(x \geq 8) = 1 - \text{binomcdf}(11,0.63,7) = 0.371$
12. $\sigma = \sqrt{np(1-p)} = \sqrt{12(0.48)(0.52)} = 1.73$