CS 333202: Probability and Statistics HW5 Part II

1. (a)
$$4 + \frac{1}{1-p}$$

(b)
$$4(1-p)+1$$

2.
$$1/(1-p)^{N-1}$$

$$3. \left(\begin{array}{c} 2N-k\\ N \end{array}\right) \left(\frac{1}{2}\right)^{2N-k}$$