Use the binomial distribution, equation (5-3), with $n = 8$ and $p = .20$.

(a) $P(W = 3) = .1468$.

(b) $P(W \leq 2) = P(W = 0) + P(W = 1) + P(W = 2) = .7969$.

(c) Using equation (5-4), $EW = np = 1.6$.

(d) Using equation (5-5), $\text{Var}W = np(1 - p) = 1.28$.

(e) $\sqrt{1.28} = 1.1314$.