Assuming p(success) for a trial is 0.1, with n=10 and 2 or less bits detected:

Using binomial distribution,

$Px = \binom{n}{x} p^x q^{n-x}$

We solve for a cumulative binomial probability P(X ≤ x):

$Px = \binom{10}{0} 0.1^0 0.9^{10} + \binom{10}{1} 0.1^1 0.9^9 + \binom{10}{2} 0.1^2 0.9^8 = 0.9298 \approx$ **0.93**