

Problem 1.4

Q (i) $P(X > 2) = ?$

Solution $P(X > 2) = (1-p)^2 = (1-0.01)^2 = 0.9801$

(ii) 98 \rightarrow break at 100.

$$P(\text{break at 100}) = (1-p)p = 0.99 \times 0.01 = 0.0099$$