

Q0

$$P = \binom{n}{k} p^k (1-p)^{n-k}$$

(assuming no shots hit)

$$P = \binom{n}{0} 0.1^0 0.9^n$$

$$= \binom{n}{0} 0.9^n$$

$$N = 16 \quad - \quad P = 0.185 \quad - \quad 1 - P = 0.815$$

Q1

10 – 0000 1010

1 – 0000 0001

5 – 0000 0101

65 – 0100 0001

Sent to 10.1.3.3

Reason network IP is most similar (10.1.5.64/29)

Q2

131- 1000 0011

23 – 0001 0111

151- 1001 0111

76 – 0100 1100

Identifier of the output interface – 1 (131.22.0.0/15)

Reason prefix is most similar to Packet address

Q3

1. 192 – 1100 0000
24 - 0001 1000
6 – 0000 0110
0 – 0000 0000

Next hop: D

2. 192 – 1100 0000
24 – 0001 1000
14 – 0000 1110
32 – 0010 0000

Next hop: B

3. 192 – 1100 0000
24 – 0001 1000
54 – 0011 0110
0 – 0000 0000

Next hop: D