

Q0

$$P = \sum_{j=0}^n \binom{n}{j} p^j (1-p)^{n-j}$$

$j=0$ (missed all shots)

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

$$n=14, p=0.23 \Rightarrow 1-p=0.77$$

$$n=15, p=0.21 \Rightarrow 1-p=0.79$$

$$\underline{n=16, p=0.19 \Rightarrow 1-p=\underline{0.81}}$$

Q1

10 => 00001010

1 => 00000001

5 => 00000101

65 => 01000001

Packet will be sent to 10.1.5.64/29 as most bits match the destination.

Q2

131 => 10000011

23 => 00010111

153 => 10010111

76 => 01001100

Packet will be forwarded to output interface 1 as most bits match source to destination.

Q3

192.24.6.0 -> next hop is D

192.24.14.32 -> next hop is B

192.24.54.0 -> next hop is D