Question 0 (Binomial Distribution):

Suppose the shooting success rate of a player is 10%, and it takes at least two success shots to kill the monster. How many times the player need to shoot to have 80% probability of killing the monster?

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

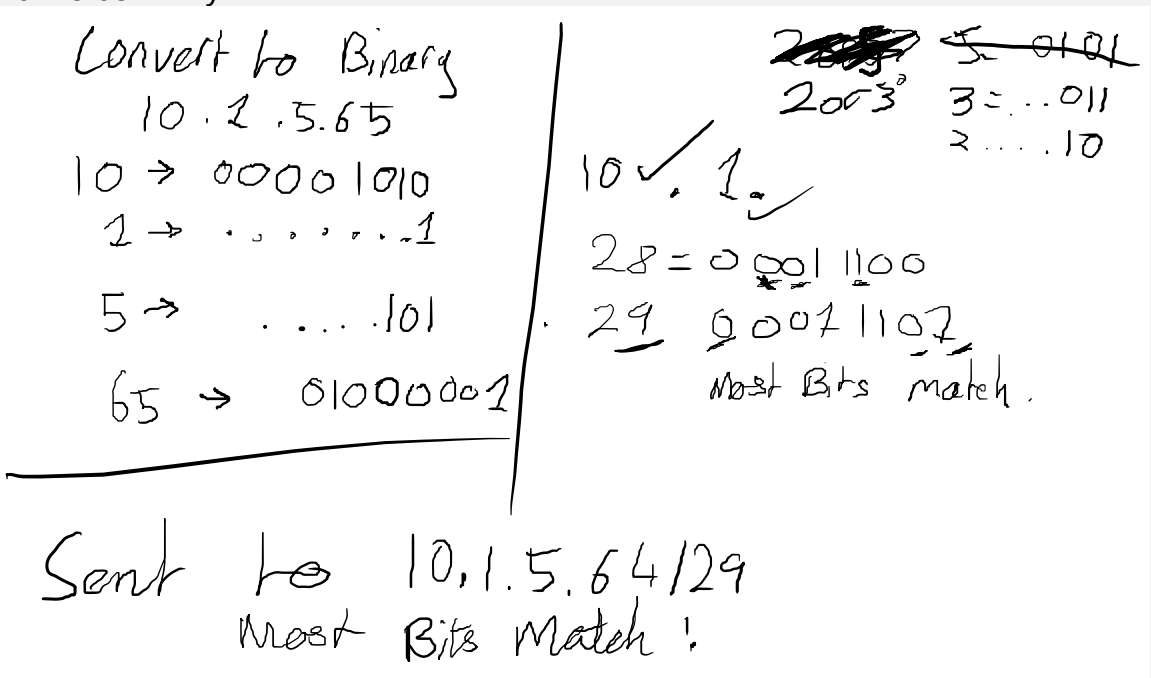
$n = 16$, $P = 0.19 \Rightarrow 1 - P = 0.81$

15 to 16 times!

Question 1:

Network	Interface	Next-hop
10.1.1.0/24	e0	directly connected
10.1.2.0/24	e1	directly connected
10.1.3.0/25	s0	directly connected
10.1.4.0/24	s1	directly connected
10.1.5.0/24	e0	10.1.1.2
10.1.5.64/28	e1	10.1.2.2
10.1.5.64/29	s0	10.1.3.3
10.1.5.64/27	s1	10.1.4.4

According to the routing table, where will the router send a packet destined for 10.1.5.65? Why?



Question 2:

Classless Inter-domain Routing (CIDR) receives a packet with address 131.23.151.76. The router's routing table has the following entries:

```
Prefix           Output Interface Identifier
131.16.0.0/12              3
131.28.0.0/14              5
131.19.0.0/16              2
131.22.0.0/15              1
```

The identifier of the output interface on which this packet will be forwarded is _____. Why?

First to base 2

131 = 1000 0011
23 = 0001 0111
151 = 1001 0111
76 = 0100 1100

1 output
131.22.0.0/15
Most Bits Match

Question 3:

Consider the following routing table of a router.

PREFIX	NEXT HOP
192.24.0.0/18	D
192.24.12.0/22	B

Consider the following three IP addresses, what their next hop will be?

1. 192.24.6.0
2. 192.24.14.32
3. 192.24.54.0

1. D

2. B

3. D