Question 0:

Shooting success rate 10%
Have >80% probability

$K = 0$
$P = 0.1$
$p^k (1-p)^{n-k}$
$0.1^0 (0.9)^n$

$N = 9$ $(0.9)^9 = 0.39 \Rightarrow 1-p = 0.61$
$N = 10$ $(0.9)^{10} = 0.35 \Rightarrow 1-p = 0.65$
$N = 11$ $(0.9)^{11} = 0.31 \Rightarrow 1-p = 0.69$
$N = 14$ $(0.9)^{14} = 0.23 \Rightarrow 1-p = 0.77$
$N = 15$ $(0.9)^{15} = 0.21 \Rightarrow 1-p = 0.79$
$N = 16$ $(0.9)^{16} = 0.19 \Rightarrow 1-p = 0.81$

Question 1:

10: 00001010   10:   00001010
1:   00000001   1:   00000001
5:   00000101   5:   00000101
65: 01000001   64/29:   10000000

It would pick 10.1.5.64/29 as it has the most bits similar to 10.1.5.65

Question 2:

131: 10000011   131: 10000011   131: 10000011
23: 00010111   19: 00010011   22: 00010110
151: 10010111
76: 01001100

The identifier will be 1 as 131.22.0.0/15 shares the most similar bit values.

Question 3:

```
192: 11000000      192: 11000000      192: 11000000
24:  00011000      24:  00011000      24:  00011000
6:   00000110      14:  00001110      54:  00110110
0:   00000000      32:  00100000      0:   00000000


192: 11000000      192: 11000000
24:  00011000      24:  00011000
0:   00~000000          12:  000011~00
0:   00000000      0:   00000000
/18                /22
```

192.24.6.0=   D
192.24.14.32= B
192.24.54.0=   D