Step 3.

my computer 129, 209, 2.201	default yatemay 127, 208, 2,151
Request  Hordware type  Protocol type  Hordware size  Protocol size  Ofcode  Sender NAC 00.15:5d:02:3u:01  Sender IP  Torget NAC 00:00:00:00:00  Torget IP 128.207.2.15	Hordwise type     Pretical type     Produce 922     Protocal 522e     Ogade     Soler MA(   00:25:64:d5:10:86     Sonder Li
10700 21	

**Turn-in**: Hand in your drawing of the ARP exchange.

## Step 4.

1. What opcode is used to indicate a request? What about a reply?

Opcode: request (1)

00 01

Opcode: reply (2)

00 02

2. How large is the ARP header for a request? What about for a reply?

Request: 28 bytes

```
▼ Address Resolution Protocol (request)
     Hardware type: Ethernet (1)
     Protocol type: IPv4 (0x0800)
     Hardware size: 6
     Protocol size: 4
     Opcode: request (1)
     Sender MAC address: Microsof_02:3a:01 (00:15:5d:02:3a:01)
     Sender IP address: 128.208.2.201 (128.208.2.201)
     Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00)
     Target IP address: 128.208.2.151 (128.208.2.151)
                                                       0000 ff ff ff ff ff ff 00 15 5d 02 3a 01 08 06 00 01
                                                         ........].;.....
 0010 08 00 06 04 00 01 00 15 5d 02 3a 01 80 d0 02 c9
                                                         0020 00 00 00 00 00 00 80 d0 02 97 00 00 00 00 00 00
 . . . . . . . . . . . . . .
Reply: 28 bytes
▼ Address Resolution Protocol (reply)
    Hardware type: Ethernet (1)
    Protocol type: IPv4 (0x0800)
    Hardware size: 6
    Protocol size: 4
    Opcode: reply (2)
    Sender MAC address: Microsof_02:3a:01 (00:15:5d:02:3a:01)
    Sender IP address: 128.208.2.201 (128.208.2.201)
    Target MAC address: Dell_d5:10:8b (00:25:64:d5:10:8b)
    Target IP address: 128.208.2.151 (128.208.2.151)
                                                  ·%d·····]·:····
0000 00 25 64 d5 10 8b 00 15 5d 02 3a 01 08 06 00 01
                                                  ...... ].:....
 0010 08 00 06 04 00 02 00 15 5d 02 3a 01 80 d0 02 c9
0020 00 25 64 d5 10 8b 80 d0 02 97 00 00 00 00 00 00
                                                   .%d.....
 . . . . . . . . . . . . . .
3. What value is carried on a request for the unknown target MAC address?
```

All 0.

```
Target MAC address: 00:00:00_00:00:00 (00:00:00:00:00:00)
Target TD address: 128 208 2 151 (128 208 2 151)
```

4. What Ethernet Type value which indicates that ARP is the higher layer protocol?

IPv4.

```
Haruware type: Etherhet (1/
Protocol type: IPv4 (0x0800)
```

5. Is the ARP reply broadcast (like the ARP request) or not?

Not.

**Turn-in**: Hand in your answers to the above questions.

Grades: 90/100

Comments:

-10 Step4 Q4: 0x0806