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**Birzeit University**

**Computer Systems Engineering Department**

**ENCS413-Computer Networks Lab**

**HW#1**

**Subnetting**

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**28/9/2012**

 **195.5.20.0/24, we need 50 host/network**

$$2^{6}=64, 64-2=62 host$$

Increment=64

255.255.255.192

|  |  |
| --- | --- |
| From | to |
| 195.5.20.0 | 195.5.20.63 |
| 195.5.20.64 | 195.5.20.127 |
| 195.5.20.128 | 195.5.20.191 |
| 195.5.20.192 | 195.5.20.255 |

1. **150.5.0.0/16, we need 500 host/network**

$$2^{9}=512, 512-2=510 host$$

Increment=512

255.255.254.0

|  |  |
| --- | --- |
| From | to |
| 195.5.0.0 | 195.5.1.255 |
| 195.5.2.0 | 195.5.3.255 |
| 195.5.4.0 | 195.5.5.255 |
| … |  |

1. **10.0.0.0/8, we need 1000 host/network.**

$$2^{10}=1024, 1024-2=1022 host$$

Increment=1024

255.255.252.0

|  |  |
| --- | --- |
| From | to |
| 195.5.0.0 | 195.5.3.255 |
| 195.5.4.0 | 195.5.7.255 |
| 195.5.8.0 | 195.5.11.255 |