**In the Ethernet frame described in the text (figure 13.5 page # 410), what is the minimum and maximum number of bytes?**

Preamble and start frame delimiter = 8

Destination and Source MAC addresses = 12

Number of data bytes = 2

Payload minimum = 46 and maximum = 1500

CRC = 4

The minimum is 8 + 12 + 2 + 46 + 4= 72 bytes

The maximum is 8 + 12 + 2 + 1500 + 4= 1526 bytes

**Suppose a higher layer application wants to send a file 12MB in size across an Ethernet LAN. How many Ethernet frames are needed? Assume the largest Ethernet payload is 1500 bytes.**

12MB=12 x 1,048,576 bytes = 12,582,912 bytes.

12582912 / 1500 = 8389 Ethernet frames