CS 372 Introduction to Computer Networks
Self-Check Exercises: Lecture 13

1) How many unique network interface hardware addresses are possible?

2) How many unique 32-bit IP addresses are possible?

3) The dotted-decimal form of 32-bit internet addresses is composed of 4 decimal numbers, separated by periods. What is range of possible values for each of the four decimal numbers?

4) What organization manages the .org TLD?

5) What is the Domain Name System (DNS) application-layer protocol used for? What transport-layer protocol does it make use of?

6) In an internet name, what is the highest-priority component? The second-highest priority component? What are subsequently prioritized components used for?

7) Suppose that we send a DNS request with ID # 46921.
    a. What is the little-endian representation (hexadecimal)? _____
    b. What is the big-endian representation (hexadecimal)? _____
    c. Which representation is required for network communication?