CSE 123a Fall 2005 Homework #1
Instructor: Stefan Savage
TAs: Calvin Hubble (chubble@cs.ucsd.edu) and
Mikhail Afanasyev (mafanasyev@cs.ucsd.edu)

Due Oct 11th at the **beginning** of class

1. Consider two hosts, A and B, connected by a single link with a capacity of *R* bps. Suppose the two hosts are separated by *m* meters, the propagation speed along the link is *s* meters/sec, and host A needs to send a packet of size *L* bits to host B.
    a. Express the propagation delay (one-way delay for a bit)
    b. Express the transmission delay (time to send the packet)
    c. Express the end-to-end delay between when the packet is sent and it is completely received (assume no overhead or queuing delay)

2. Peterson & Davie 1.15

3. Peterson & Davie 1.3
   Update: this problem (P&D 1.3) was assigned erroneously… you do not have to complete it.

4. If all the links in the Internet were to provide a reliable delivery service would a reliable transport layer service be completely redundant? Why or why not?

5. What are the drawbacks of sentinel-based framing?