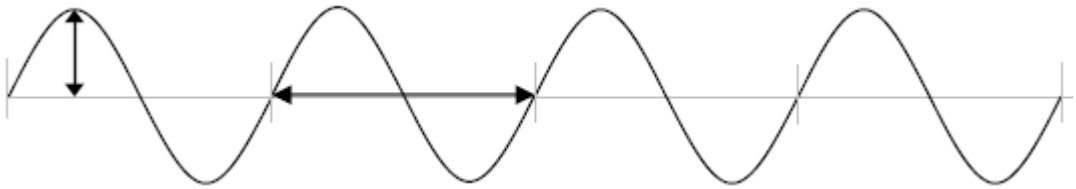
Name: _____

Physics 102 - Wave Worksheet

1. In the picture below, label *amplitude* and *wavelength*.



2. Define the following terms:

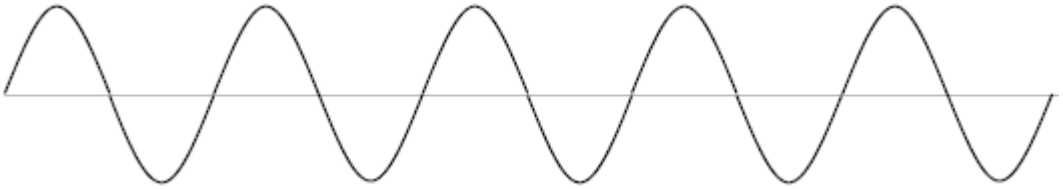
   frequency:_____

   period:_____

   wave speed:_____

3. The time from the beginning to the end of the wave trains below is 1 second. (Wave train = multiple waves following each other.) Use a ruler to answer the questions.

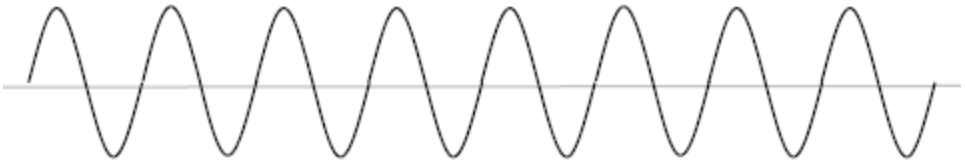
Wave A



a) How many waves are there in this wave train? _____

b) Wavelength _____ m c) Amplitude _____ m d) frequency _____ Hz e) speed _____ m/s

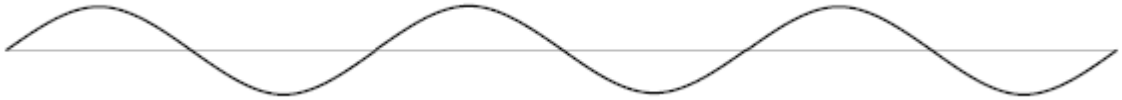
Wave B



a) How many waves are there in this wave train? _____

b) Wavelength _____ m c) Amplitude _____ m d) frequency _____ Hz e.) speed _____ m/s

Wave C

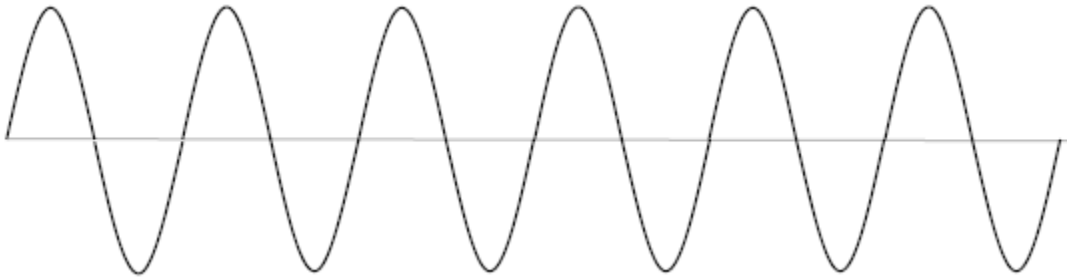


a) How many waves are there in this wave train? _____

b) Wavelength _____ m c) Amplitude _____ m d) frequency _____ Hz e.) speed _____ m/s

Wave D

If this entire wave train is 30 meters long what is the wavelength of this wave? _____



4. Two fire trucks with sirens on speed *toward* and *away* from an observer as shown below.

A) Which truck produces a higher than normal siren frequency?

B) Which truck produces a lower than normal siren frequency?

5. The changed pitch of the Doppler effect is due to changes in

a. Wave speed b. wave frequency c. amplitude

6. Circle each of the letters that has a true statement about the Doppler Effect:

a. It occurs when a wave source moves toward an observer.

b. It occurs when an observer moves toward a wave source.

c. It occurs when a wave source moves away from an observer.

d. It occurs when an observer moves away from a wave source.