**Wave Speed Practice**

1. In 10 minutes, seven waves hit a dock. The wavelength is 50 meters.
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
2. An incoming storm creates waves that have a wavelength of 3m. A boat is hit by 1 wave every 5 seconds.
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
3. A low frequency radio wave has 60 cycles in 2 seconds. The wavelength is 3,000 km.
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
4. FM radio has 3.0 x 107 waves each second. The wavelength is 1m.
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
5. AM radio has 3.0 x 104 waves each second. The wavelength is 1,000m
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
6. Which is faster FM or AM radio signals? Explain using your answers from questions 4 and 5.
7. A slinky has a longitudinal wave every 15 seconds. The wavelength is 0.24 meters.
   1. What is the frequency of the waves?
   2. What is the period of the waves?
   3. What is the wave speed?
8. How is a transverse wave different from a longitudinal wave?
9. Compare compressions and rarefratctions to crests and troughs.
10. Describe how to measure wavelength in a longitudinal wave.