

Vibrations and Waves Assignment

NAME _____

1.
 - a) State what is meant by "period of a wave".
 - b) State the symbol for period and the units it is measured in.
2. Draw a transverse wave and label a trough, crest, amplitude and wavelength.
3.
 - a) State what is meant by "frequency of a wave".
 - b) State the symbol for frequency and the units it is measured in.
4.
 - a) Draw two transverse waves – one with high frequency and one with low frequency, both having the same amplitude.
 - b) State which of the two waves in part a) has a larger wavelength.
 - c) Hence state whether decreasing the frequency increases or decreases the wavelength.
5.
 - a) Draw a longitudinal wave.
 - b) Describe how the wavelength of a longitudinal wave is measured.
 - c) Describe the motion of a single air particle involved in a sound wave.
6. A nurse counts 76 heartbeats in one minute. Calculate the period and frequency of the heart's oscillations.
7. Calculate the speed of waves in water that are 0.4m apart and have a frequency of 2Hz.