Wave Calculations   Name …………………………

wave speed = frequency x wavelength   frequency = 1 / period

speed = distance / time   period = 1 / frequency

1. What is the speed of a wave that has a frequency of 50 Hz and a wavelength of 4 m?

2. Calculate the speed of a wave that has a frequency of 5000 Hz and a wavelength of 20 m

3. A wave has a frequency of 5 Hz and a wavelength of 50 cm. What is its speed?

4. Calculate the speed of a wave that has a frequency of 5 kHz and a wavelength of 4 m

5. Find the frequency of a sound wave of speed 330 m/s and wavelength 11 m.

6. What is the frequency of a water wave of speed 12 m/s and wavelength 6 m?

7. A student makes regular waves at one side of a swimming pool that is 10m wide. There are 50 waves across the whole width of the pool.

   a. Calculate the wavelength of the waves.

   b. If it takes a wave 20 seconds to cross the pool, what is the speed of the waves?

   c. Use your answers to a) and b) to calculate the frequency of the waves.

   d. Calculate the period of the waves.

   e. Calculate how many waves the student would make in one minute.