Name: Period:

Honors and Conceptual Physics: Waves I

Fill in the missing values in the chart below.

Velocity **v**	Frequency f	Wavelength λ	Velocity **v**	Wavelength λ	Frequency f
	170 Hz	2 m	7,000 m/s	4 m	
	300 Hz	3 m	150 m/s		30 Hz
	880 Hz	0.38 m	10 m/s		9,000 Hz
	2,000,000 Hz	0.005 m	3,500 m/s		500 Hz
360 m/s	180 Hz		900 m/s		45 Hz
200 m/s	5,000 Hz		300,000,000 m/s	0.00000007 m	

1. What is the difference between a transverse wave and a longitudinal wave? Draw a picture of each.
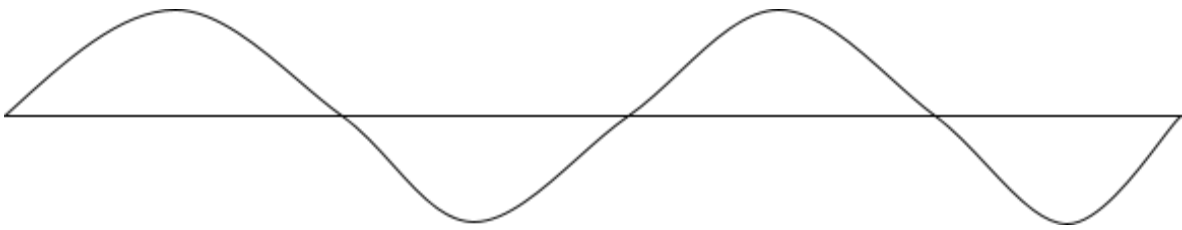
2. A wave goes through six cycles in two seconds and its wavelength is 4 m.
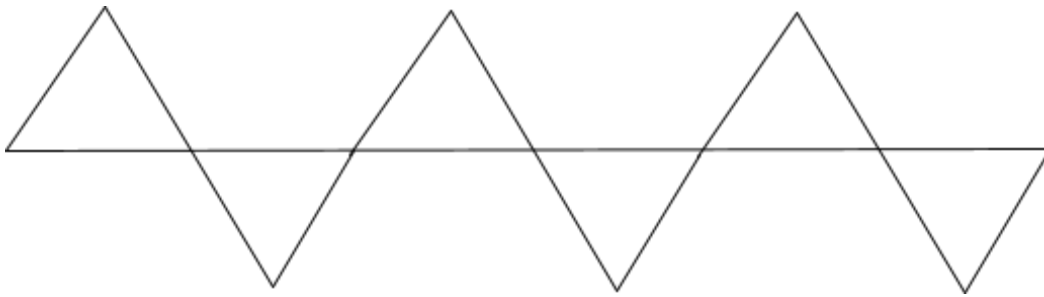a. What is its frequency?

b. What is its speed?

3. Which will be heard first from the same distance across a room: a shout or a whisper? Explain.

4. How many cycles are shown in the diagram of a wave below? Be careful!!!

5. Okay, how many cycles in this wave?

6. NOW THIS ONE. COUNT THE CYCLES.