Name: _____ Date: _____

Anatomy of a Wave Worksheet Answers

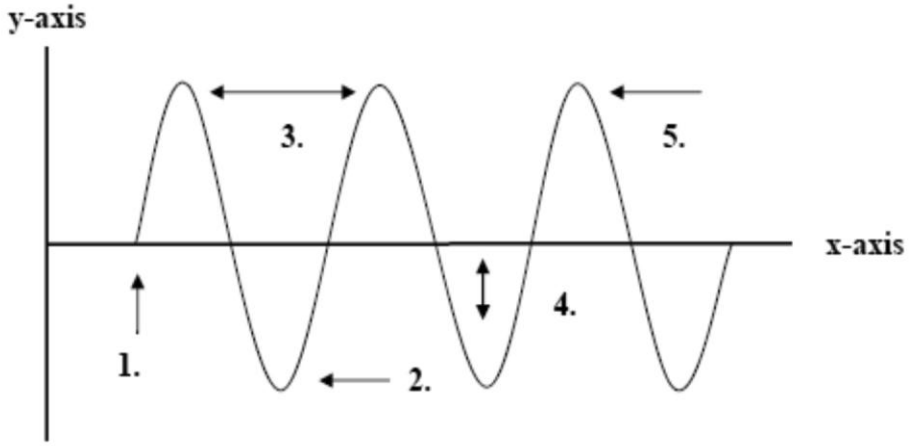
Objective: Identify the parts of a wave and draw your own diagrams of waves.

Background: Many types of waves exist, including electromagnetic waves and mechanical waves. Waves move in different ways and have different properties.

Part 1

In the diagram below, identify the parts of a wave by using the provided definitions.

#__5_ = **crest**	The highest point of the wave above the line of origin.
#__2_ = **trough**	The lowest point of the wave below the line of origin.
#__1_ = **line of origin**	Signifies the original position of the medium.
#__3_ = **wavelength**	The distance between two consecutive crests.
#__4_ = **amplitude**	The distance from the line of origin to a crest or trough of a wave.



Part 2

On separate sheets of graph paper, draw four different waves with the following measurements. Label the parts and include the measurements.

wave #	crest	trough	wavelength
1	1 cm	1 cm	2 cm
2	3.5 cm	3.5 cm	2.5 cm
3	.5 cm	.5 cm	3 cm
4	2 cm	2cm	.5 cm

Concluding question: State which wave you think has the *highest frequency* and which might have the *lowest frequency*. Explain the reasons for your selections.

#4 has the highest frequency because it has the shortest wavelength, and frequency is inversely proportional to wavelength.

#3 has the lowest frequency because it has the longest wavelength, and frequency is inversely proportional to wavelength.