

Wave Test 1 Review Sheet

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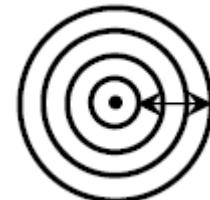
1. Draw two wave cycles "in phase" (crest/crest and trough/trough). Give one wave an amplitude of 2 boxes and a wavelength 4 boxes. Draw another wave with the **same wavelength** and an amplitude of 4 boxes.

2.

- a) How many wave cycles are there between the arrows in the picture shown on the right? _____

- b) If the distance between the arrows is 1.80 cm, what is the wavelength of this wave? _____

- c) Use a dotted line to show where the troughs are in the picture on the right.



3. Draw a transverse wave (side view) with a wavelength of 6 boxes and an amplitude of 3 boxes.

- a) Label two points on your wave that are in phase and 2 points that are "out of phase".

4. Draw a standing wave that is 2 wavelengths long.

a) Label the **nodes** with **black dots**. Label the **antinodes** with an **X**.

5. Show diffraction through a slit.

6. What is the one thing that a wave transfers? _____

7. What is a pulse _____

8. What is a periodic wave? _____

9. Longitudinal wave - vibration is _____ to the direction that the wave travels.

ex) _____

10. Transverse Wave - vibration is _____ to the direction that the wave travels.

ex) _____

11. Frequency - _____ units _____ equation _____

f and T have an _____ relationship.

12. Draw a wave with a very high frequency and a very low frequency.

high frequency

low frequency

13. What kinds of overlapping waves create constructive interference? - When a crest overlaps a

_____ destructive interference ? When a crest overlaps a _____

14. What angle produces destructive interference? _____ constructive interference?

15. A radar gun is used to measure the speed of a pro pitchers fastball. Explain how this technology uses waves to accomplish this task? (hint: it's just like the radar that cops use to catch speeders.)

16. Label the wave characteristic below with the letter **M** if it is determined by the medium of the wave or **S** if it is determined by the source of the wave.

Speed _____ Frequency _____ Period _____ Amplitude _____ Wavelength _____