1. A disturbance that transmits energy and is caused by vibrations is called a \_\_\_\_\_\_\_\_\_\_\_. Some can travel through a vacuum but others need a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. The ability to do work or cause change to matter is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

3. The amount of work done when a force of 1N acts through a distance of 1m is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

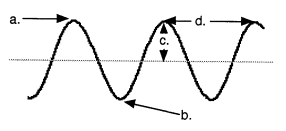
4. The highest point on a wave is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, while the lowest point is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

5. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a wave is a measure of the amount of energy it carries.

6. The distance from one crest to the next crest is the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

7. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a measure of the number of waves that pass a point in a given amount of time.

8. The illustration to the right shows a wave. Label each part in the space below:



a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

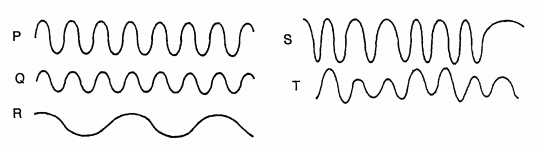
d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. True or False: Waves are created by a vibration. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10. True or False: An ocean wave will transport ocean water from near the middle of the ocean to the shore. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. True or False: All waves can be travel in a vacuum. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12. Draw a diagram that shows how a wave/energy travels in a medium. (Think about the drop of water.)

Use the diagrams of waves drawn below to answer the following questions.

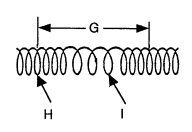
13. Waves P and Q have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but wave P has twice the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of wave Q.

14. Waves Q and R have the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but wave R has twice the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of wave Q.

15. Wave \_\_\_\_\_\_\_\_ shows a steady frequency but changing amplitude.

16. Wave \_\_\_\_\_\_\_\_ shows stead amplitude but changing frequency.

17. Waves \_\_\_\_\_\_ and \_\_\_\_\_\_\_ have a low amplitude and a steady frequency.

\*\*18. The following questions refer to the diagram to the right:

a. Is this wave transverse or longitudinal? How do you know?

b. Which way does the medium vibrate in relation to the energy?

c. Letter H represents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d. Letter I represents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e. Letter G represents \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*\*19. What is the difference between a transverse and a longitudinal wave?