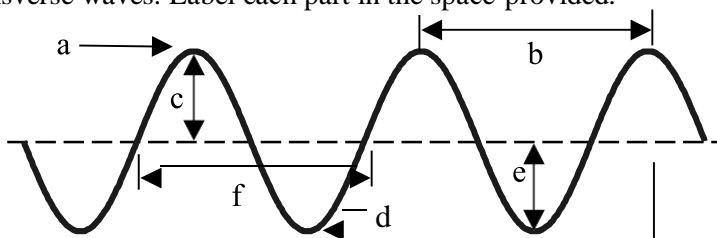


## Wave basics Worksheet 2

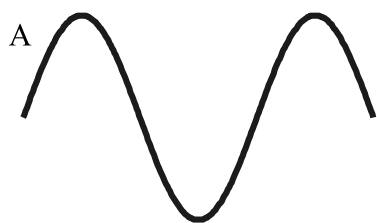
1. The illustration below shows a series of transverse waves. Label each part in the space provided.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_
- e. \_\_\_\_\_
- f. \_\_\_\_\_

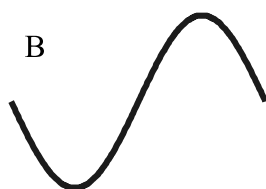


Fill in the blanks:

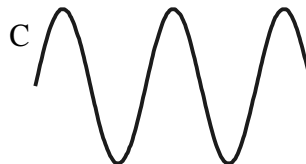
2. Waves carry \_\_\_\_\_ from one place to another.
3. The highest point on a transverse wave is the \_\_\_\_\_ while the lowest part is the \_\_\_\_\_.
4. The \_\_\_\_\_ is the height of the wave.
5. The distance from one crest to the next is the \_\_\_\_\_.
6. Below are a number of series of waves. Underneath each diagram write the numbers of waves in the series.



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_



\_\_\_\_\_

- a. Which of the above has the biggest amplitude? \_\_\_\_\_
- b. Which of the above has the shortest wavelength? \_\_\_\_\_
- c. Which of the above has the longest wavelength? \_\_\_\_\_

7. Express in words and mathematically the relationship between

- a. period and frequency

b. wavelength and frequency

c. wavelength and period

8. Consider a wave generator that produces 10 pulses per second. The speed of the waves is 300. cm/s.

a. What is the wavelength of the waves?

b. What happens to the wavelength if the frequency of pulses is increased?

9. A wave on Beaver Dam Lake passes by two docks that are 40.0 m apart.
- If there is a crest at each dock and another three crests between the two docks, determine the wavelength.
  - If 10 waves pass one dock every 16.0 seconds, determine the period and frequency of the wave.
  - What is the speed of the wave?
10. The wavelength of a sound wave in this room is 1.13 m and the frequency is 301 Hz.
- What is the speed of the wave in the room?
  - If you double the frequency of the sound wave, determine its speed.
  - What happens to the wavelength if you cut the frequency in half?