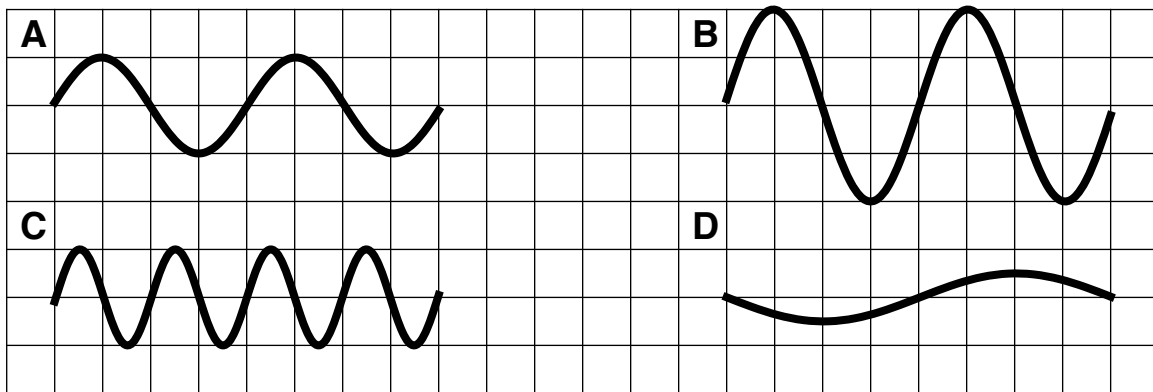
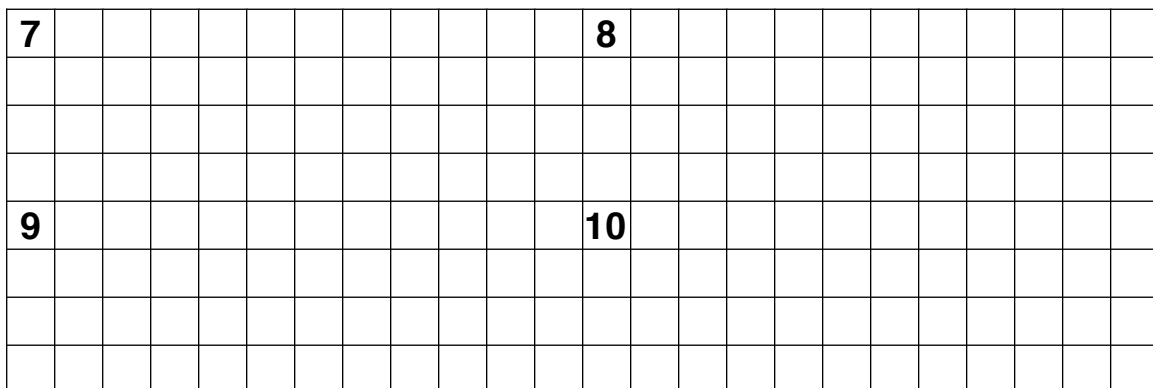


Wave Diagrams

Questions 1 to 10 refer to the following waves. The scale is 1/4" per square.



1. Determine the wavelength of each of the waves:
 A: _____ B: _____ C: _____ D: _____
2. Which wave has the greatest amplitude?
3. Which wave has the highest frequency?
4. Which wave has the lowest amount of energy?
5. Which wave has the lowest frequency?
6. Which two waves have the same frequency?
7. Below, draw a wave that has the same amplitude and twice the frequency of wave A.
8. Below, draw a wave that has the same frequency and half the amplitude of wave B.
9. Below, draw a wave that has twice the wavelength and half the amplitude of wave C.
10. Below, draw a wave that has four times the frequency and twice the amplitude of wave D.



Wave Diagrams

For each of the following, you will be given two different waves. On the same reference line, draw both waves. Then, using a colored pencil, draw in their resulting superposition. Please label the waves as "A", "B" or "Resultant".

"In phase" means both waves start going up. "180° out of phase" means one wave goes up and the other goes down.

- 11. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1 inch & amplitude = 1/2 inch; 180° out of phase
- 12. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1 inch & amplitude = 1/2 inch; in phase

11																					12																				

- 13. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1 inch & amplitude = 1/4 inch; in phase
- 14. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1 inch & amplitude = 1/4 inch; 180° out of phase

13																																								14																																								

- 15. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1/2 inch & amplitude = 1/2 inch; in phase
- 16. A: wavelength = 1 inch & amplitude = 1/2 inch
 B: wavelength = 1-1/4 inch & amplitude = 1/4 inch; in phase

15																																									16																																									