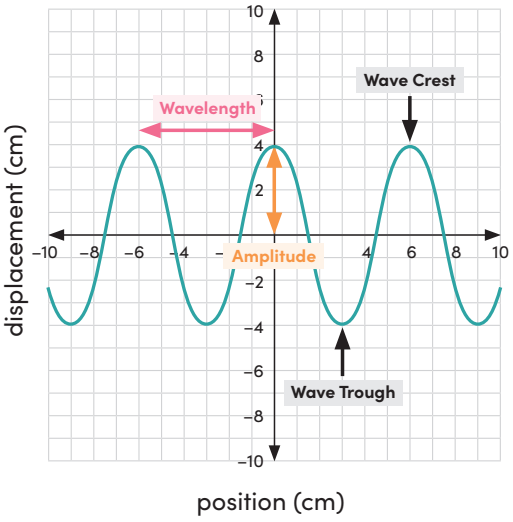
Characteristics of Waves: Part 1

Waves are patterns of motion that carry energy from one place to another. Some examples of waves include sound waves, water waves, and light waves. A simple wave has a repeating pattern with a specific wavelength, frequency, and amplitude.

The **amplitude** of a wave is how far it dips down and rises up from its resting position. In this example, the amplitude is 4 centimeters.



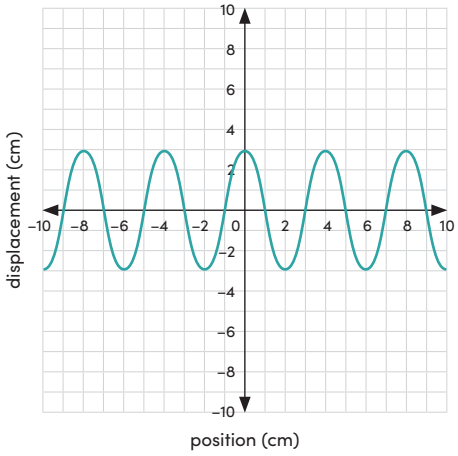
The **wavelength** of a wave is the distance between two consecutive crests or two consecutive troughs. In this example, the wavelength is 6 centimeters.

The **frequency** of a wave is the number of wavelengths that pass a given point in a certain amount of time. If two waves are traveling at the same speed, the wave with the smaller wavelength has the greater frequency.

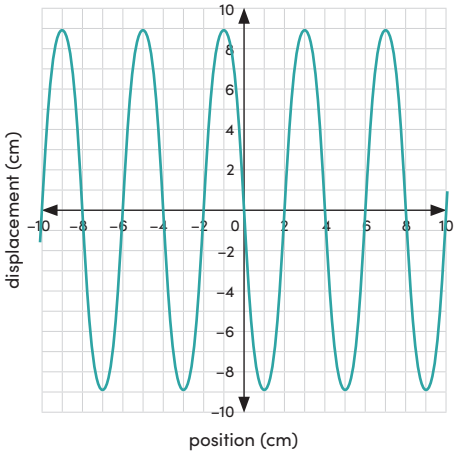
Answer the questions below. You can assume that the waves in each set are traveling at the same speed.

1.

Wave A



Wave B

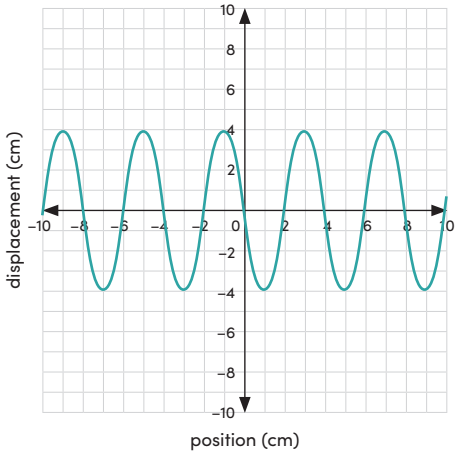


Which wave has the greater **amplitude?**

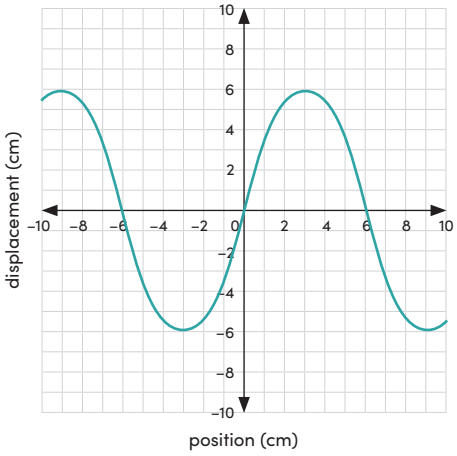
Wave B

2.

Wave C



Wave D



Which wave has the greater **wavelength?**

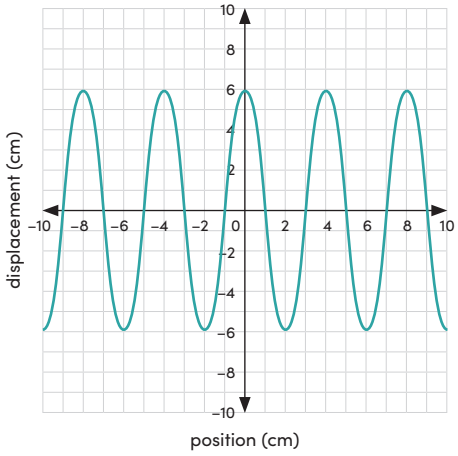
Wave D

Characteristics of Waves: Part 1

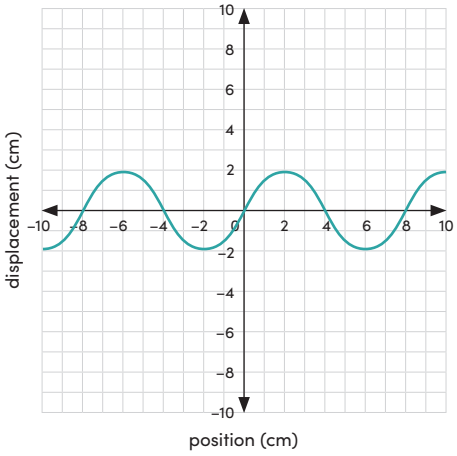
Keep going! Answer the questions below. You can assume that the waves in each set are traveling at the same speed.

3.

Wave E



Wave F

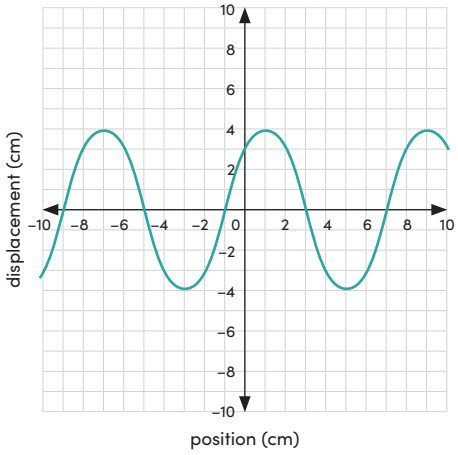


Which wave has the greater **frequency?**

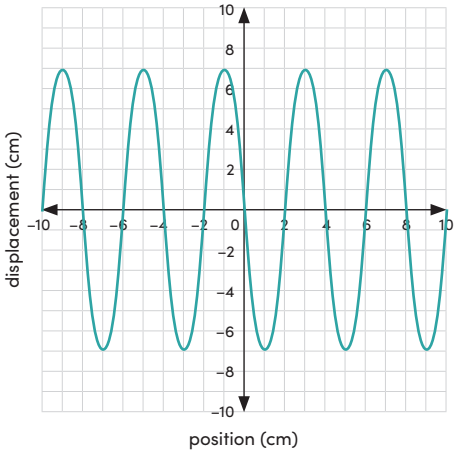
Wave E

4.

Wave G



Wave H

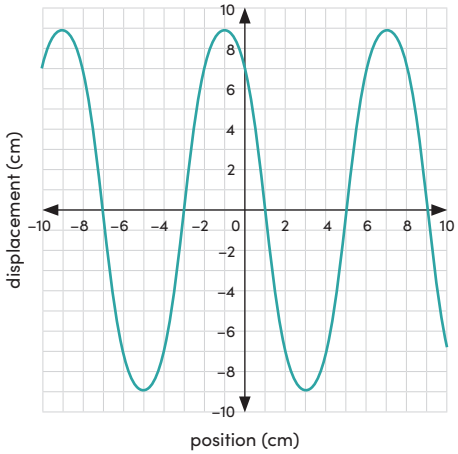


Which wave has the greater **amplitude?**

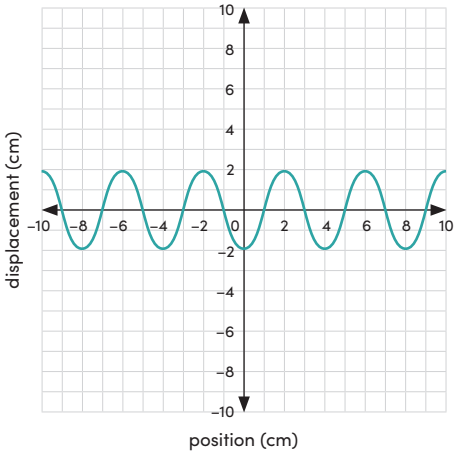
Wave H

5.

Wave J



Wave K



Which wave has the greater **frequency?**

Wave K