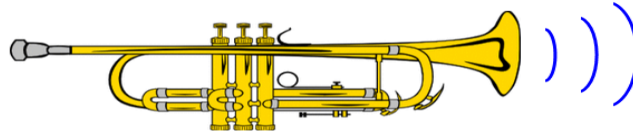


Sound Wave (ANSWER KEY)

1. A trumpet blares a loud note at one end of a football field. Assuming the sound wave travels at 340 m/s, how many seconds does it take the trumpet note to travel to the opposite end of the field (about 100 m)?

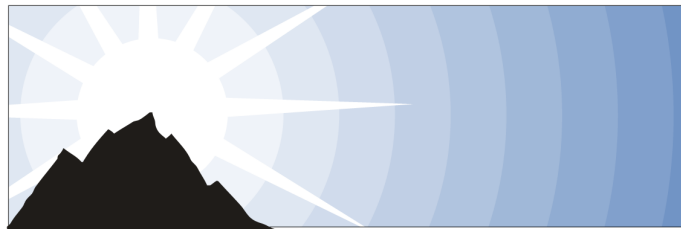


$$T \approx 0.29 \text{ s}$$

2. What is the speed of a wave that has a period of 0.050 seconds and a wavelength of 2.75 m?

$$55 \text{ m/s}$$

3. A child stands in a valley and faces a large mountain. The child shouts "Hello!" and waits for the echo. The echo returns in 2.5 seconds. Assuming that sound travels at 340 m/s in the valley, how far away is the mountain that caused the echo?



$$D = v \times t$$

$$D = (340)(1.25 \text{ seconds})$$

$$D = 425 \text{ meters}$$