



Solution

What is the magnitude of the detected sound *frequency shift* from 170 Hz during the projectile flight described in the passage?

- ☐ A) ~~It falls to zero, then increases.~~

As the object moves up and slows down, the frequency shift is negative and falls to zero at the peak of the object's flight; as the object falls, the shift becomes increasingly positive. However, to find the *magnitude* of the frequency shift from 170 Hz, the negative or positive sign of the shift can be ignored and only the absolute value matters. Thus, **A** is the best answer.

- ☐ B) It is constant throughout the flight.
- ☐ C) It rises continuously.
- ☒ D) It falls continuously.

I missed this question because I...