

**24** An ambulance siren emits a sound with a single frequency  $f$ .

The ambulance travels towards, passes close to, and then travels away from a stationary observer.

Which statement describes the frequency of the sound detected by the observer as the ambulance **passes** the observer?

- A** equal to  $f$  and decreasing
- B** equal to  $f$  and increasing
- C** greater than  $f$  and constant
- D** less than  $f$  and constant

**25** A sound wave has a frequency of  $f$  and a wavelength of  $\lambda$ . The wave travels at a speed of  $v$ .