C (Δλ)

Doppler Effect formula: V = --------------

λo

V = velocity of the object

C = speed of light (300,000 km/sec)

Δλ = difference in wavelengths (observed – actual)

Λo = observed wavelength

Use the formula to solve these:

A nearby star has an observed wavelength for the hydrogen absorption spectra of 428 nm. The actual wavelength is 434 nm. What is the velocity of the star? In what direction is the star moving (blueshift or redshift)?