6. (a) The amplitude is $y_m = 6.0\,\text{cm}$.

(b) We find λ from $2\pi/\lambda = 0.020\pi$: $\lambda = 100\,\text{cm}$.

(c) Solving $2\pi f = \omega = 4.0\pi$, we obtain$f = 2.0\,\text{Hz}$.

(d) The wavespeed is $v = \lambda f = (100\,\text{cm})(2.0\,\text{Hz}) = 200\,\text{cm/s}$.

(e) The wave propagates in the negative x direction, since the argument of the trig function is $kx + \omega t$ instead of $kx - \omega t$ (as in Eq. 17-2).

(f) The maximum transverse speed (found from the time derivative of y) is

$$u_{\text{max}} = 2\pi f y_m = \left(4.0\pi\,\text{s}^{-1}\right)(6.0\,\text{cm}) = 75\ \text{cm/s}\ .$$

(g) $y(3.5\,\text{cm}, 0.26\,\text{s}) = (6.0\,\text{cm})\sin[0.020\pi(3.5) + 4.0\pi(0.26)] = -2.0\,\text{cm}$.