$$x(t) = \sin(2\pi t) = \sin(\omega_0 t) \qquad \omega_0 = 2\pi$$

$$X(\omega) = \frac{\pi}{j}\left[\delta(\omega - \omega_0) - \delta(\omega + \omega_0)\right]$$

$$X(\omega) = \frac{\pi}{j}\left[\delta(\omega - 2\pi) - \delta(\omega + 2\pi)\right]$$