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

$$x(\omega) = \frac{\pi}{5} \left[ S(\omega - \omega_0) - S(\omega + \omega_0) \right]$$

$$x(\omega) = \frac{\pi}{5} \left[ S(\omega - 2\pi) - S(\omega + 2\pi) \right]$$