$$x_a[n] = \cos(0.1n)$$

$$X_a(\Omega) = \pi\left[\delta(\Omega - 0.1) + \delta(\Omega + 0.1)\right]$$

$$x_b[n] = \sin\left(\frac{\pi n}{6}\right)$$

$$X_b(\Omega) = \frac{\pi}{j}\left[\delta\left(\Omega - \frac{\pi}{6}\right) - \delta\left(\Omega + \frac{\pi}{6}\right)\right]$$

$$x_c(t) = \cos\left(10^6 \pi t\right) \quad \text{w/} \quad F_S = 2\,MHz$$

$$T_S = 0.0000005\ s$$

when sampled

$$x_c[n] = \cos\left(10^6 \pi \frac{1}{2 \cdot 10^6} n\right) = \cos\left(\frac{\pi}{2} n\right)$$

$$X_c(\Omega) = \pi\left[\delta\left(\Omega - \frac{\pi}{2}\right) + \delta\left(\Omega + \frac{\pi}{2}\right)\right]$$