

Example Problem

Given: $x[n] = \cos(0.48\pi n) + \cos(0.52\pi n)$

With $F_s = 1$ kHz and $N=10$

1. What are the two original frequencies in Hertz?
2. With $N=10$, will freq leak occur or not?
3. If we zero pad out to $M=50$, will this fix the freq leak?
4. If we increase our samples to $N=100$, will this fix the freq leak?