Homework 0

T 09-01

$$x(t) = 8\sin(2\pi t) + 8\sin(10\pi t) + 4\sin(14\pi t)$$

a) band limit f_{max} :

$\omega_{max} = 14\pi$

$$\boxed{f_{max} = 7 \, Hz}$$

b) minimum sampling rate?

$$f_{sample} = 2 \cdot f_{max}$$

$$\boxed{f_{sample} = 14 \, Hz}$$

c) $\boxed{8\sin(10\pi t) \ \& \ 4\sin(14\pi t) \ will \ alias}$