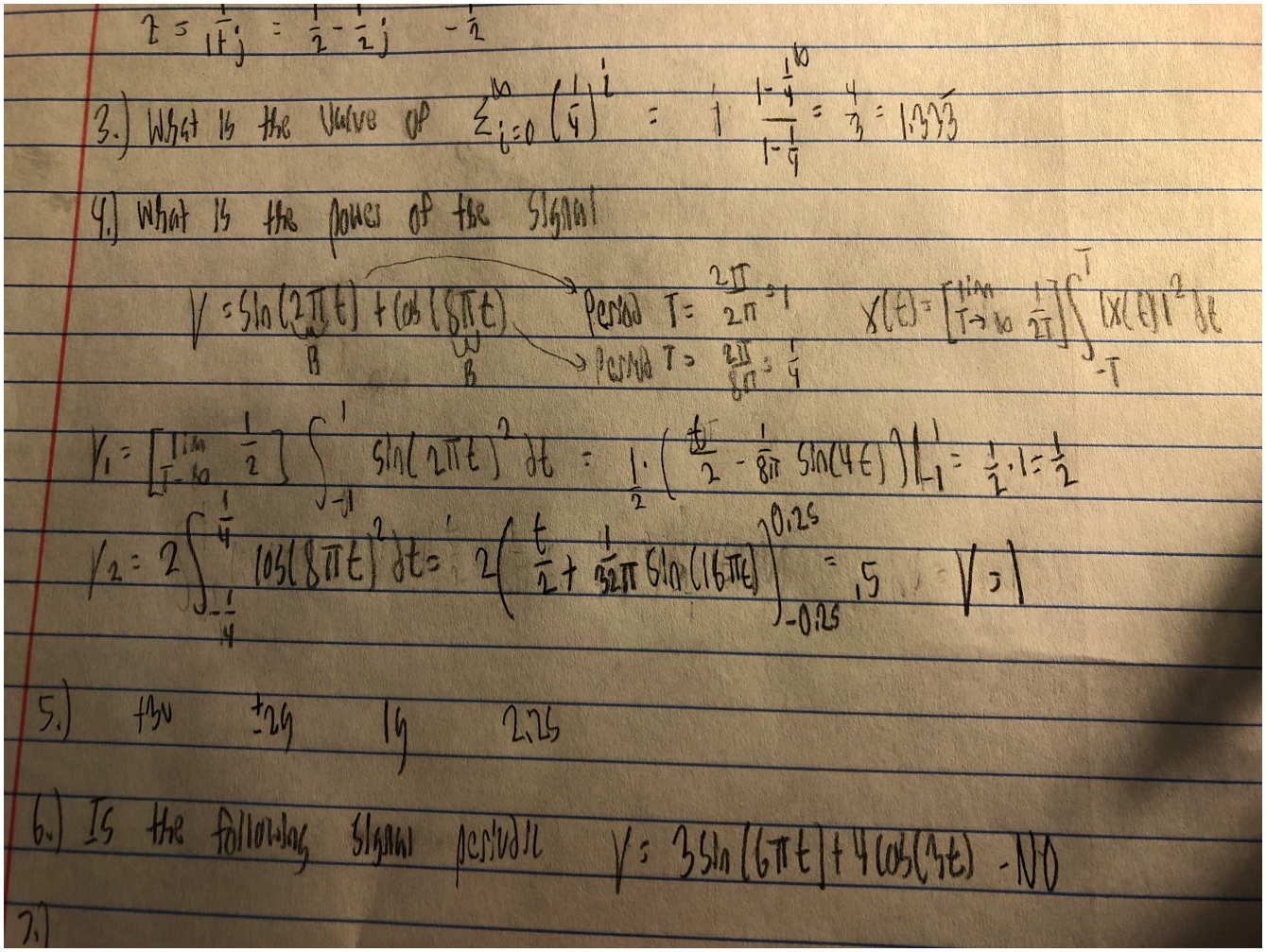

$$y = \sin(2\pi t) + \cos(8\pi t)$$

$T = 1$ $\qquad$ $T = \frac{1}{4}\,T = \frac{2\pi}{8}$

Power

$$x(t) = \left[\lim_{T\to\infty} \frac{1}{2T}\right] \int_{-T}^{T} |x(t)|^2 \, dt$$

$$y_1 = \left[\lim_{T\to\infty} \frac{1}{2}\right]^{1/2} \int_{-1}^{1} |\sin(2\pi t)|^2 \, dt =$$

$$= \frac{t}{2} - \frac{\sin(2(2\pi)t)}{4(2\pi)}\Bigg]_{-1}^{1} = \frac{t}{2} - \frac{\sin(4\pi t)}{8\pi}\Bigg]_{-1}^{1}$$

$$y_1 = \frac{1}{2}\left[\frac{t}{2} - \frac{\sin(4\pi t)}{8\pi}\right]_{-1}^{1} = \frac{1}{2} \cdot 1 = \frac{1}{2}$$

$$y_2 = \left[\lim_{T\to\infty} \frac{2}{T}\right] \int_{-\frac{1}{4}}^{\frac{1}{4}} |\cos(8\pi t)|^2 \, dt$$

2

$$y_2 = 2 \cdot 0.25 = \frac{1}{2}$$

$$\boxed{y_{pow} = \frac{1}{2} + \frac{1}{2} = 1}$$