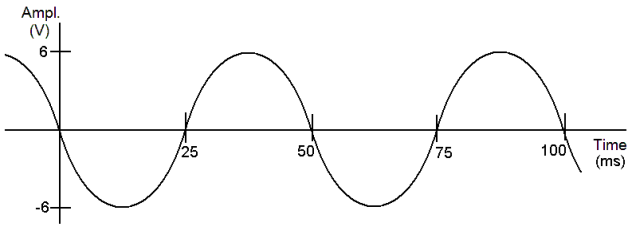
CSE Department, North South University

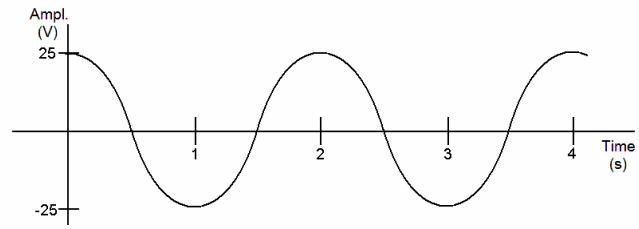
ETE131: Introduction to Telecommunications & Computer Engineering (SyR)

Problem Sheet 4: Time and Frequency Domain Plots

1. Draw the time domain plot for the following waves:
   - $s(t) = 10 \text{ Sin}(20 \pi t)$
   - $s(t) = 3 \text{ Sin}(0.001\pi t + \frac{3}{4}\pi)$
   - $s(t) = 2 \text{ Sin}(15710t - 1.571)$

2. Write the equation for the following sine waves:





3. Draw the frequency spectrum (frequency domain plot) for the following waves
   - $s(t) = 8$
   - $s(t) = 5 + 10 \text{ Sin}(20 \pi t) + 3 \text{ Sin}(30 \pi t + \frac{3}{4}\pi)$
   - $s(t) = 2 \text{ Sin}(20 \pi t - 0.33) + 8 \text{ Sin}(30 \pi t + \frac{3}{4}\pi) + 2 \text{ Sin}(37.704 t - 1.51) + 9$