1. Determine an expression for the following signals. Simplify your answer.

\[ x(t) = u(t + 2) + u(t - 3) \]

2. Sketch the following continuous-time signals.
   a. \( x(t) = u(t + 2) + u(t - 3) \)
   b. \( x(t) = 5u(-2t + 6) \)
   c. \( x(t) = (3t + 1)(u(t - 2) - u(t - 4)) \)
   d. \( x(t) = e^t(u(t - 1) - u(t - 2)) \)

3. A continuous-time signal, \( x(t) \), is shown below. Sketch each of the following signals.

\[ y(t) = x(t - 1) \]
\[ y(t) = x(2 - t) \]
\[ y(t) = x(2t + 1) \]
\[ y(t) = x\left(\frac{4 - t}{2}\right) \]
\[ y(t) = (x(t) + x(-t))u(t) \]
\[ y(t) = x(t)\left(\delta\left(t + \frac{3}{2}\right) - \delta\left(t - \frac{1}{2}\right)\right) \]
4. Determine whether or not the following continuous-time signals are periodic. If the signal is periodic, determine what the fundamental frequency is.

a. \( x(t) = 5 \sin\left(4t - \frac{\pi}{6}\right) \)

b. \( x(t) = e^{\cos(t)} \)

c. \( x(t) = te^{\cos(t)} \)

5. For the following waveform, determine the amplitude, period, frequency, time shift, and phase delay. Write an expression for the waveform.