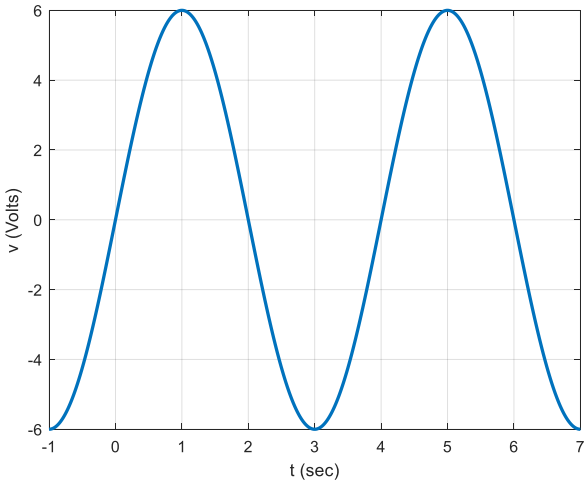
P1 Write an equation for the following sinusoid in terms of a cosine function, i.e. $A\cos(\omega t + \theta)$:



Don't forget units!

a) What is its period (in s)? Hint: between 2 s and 7 s.

b) What is its frequency (in Hz)? Hint: between 0.1 and 0.5 Hz.

c) What is its angular frequency (ω)? Hint: between 1 and 3.

d) What is its phase in degrees? Hint: negative

e) Assuming it's a voltage waveform, what is its V_p? V_{pp}? V_{rms}?

f) What would be its output at t=1.5 sec? Hint: Verify your answer graphically, but use your function to derive a numerical value to 3 significant digits.

P2 Reduce the following expression to a single cosine with a phase angle noted in degrees in the range of $(-180° \le \theta \le 180°)$. Hint: Magnitudes are always positive, and for this problem is a whole number; the phase of this problem should be negative.

$6\cos(4t) - 8\sin(4t)$