P1 Given the sinusoidal voltage $v(t) = 50 \cos(30\,t + 10°)$ find

a) amplitude V_m in Volts:

b) frequency ω in rads/sec:

c) frequency f in Hz:

d) period T in seconds:

e) the voltage at t = 10ms:

P2 Express the following as a cosine with phase angle

a) $4 \sin(5\,t - 30°)$

b) $13 \cos(2\,t) + 5 \sin(2\,t)$

P3 Given: $v(t) = 10 \cos(4\,t - 60°)$ and $i(t) = 4 \sin(4\,t + 50°)$, determine which sinusoid leads, and by how many degrees.