

Problem 16

Show that $A \cos \omega_0 t + B \sin \omega_0 t$ can be written in the form $r \sin(\omega_0 t - \theta)$. Determine r and θ in terms of A and B . If $R \cos(\omega_0 t - \delta) = r \sin(\omega_0 t - \theta)$, determine the relationship among R , r , δ , and θ .