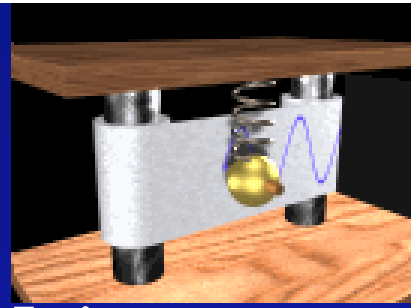
Example



A 3 kg mass is attached to a spring (k=24 N/m). It is stretched 5 cm. At time t=0 it is released and oscillates.

Which equation describes the position as a function of time x(t) =

A) 5 sin(ωt) B) 5 cos(ωt) C) 24 sin(ωt)

D) 24 cos(ωt) E) -24 cos(ωt)

We are told at t=0, x = +5 cm. x(t) = 5 cos(ωt) only one that works.