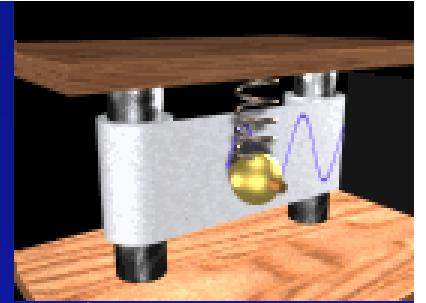# Example

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.

How long does it take for the block to return to x=+5cm?

A) 1.4 s   B) 2.2 s   C) 3.5 s

ω = sqrt(k/m)

 = sqrt(24/3)

 = 2.83 radians/sec

Returns to original position after 2 π radians

T = 2 π / ω = 6.28 / 2.83 = 2.2 seconds