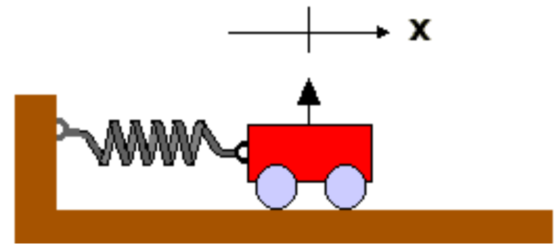
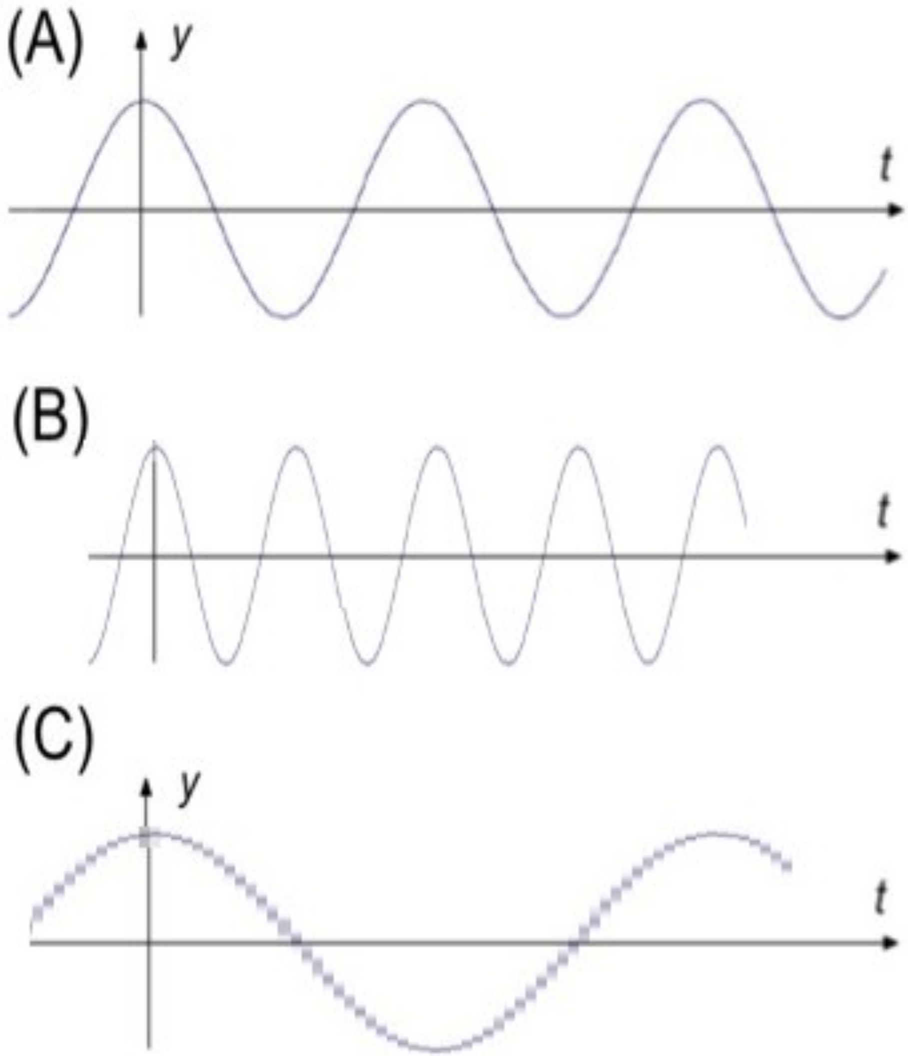
A mass connected to a spring is oscillating back and forth. Consider two possibilities:

(i) at some point during the oscillation the mass has $v = 0$ but $a \neq 0$

(ii) at some point during the oscillation the mass has $v = 0$ and $a = 0$.



1. Both occur sometime during the oscillation.
2. Neither occurs during the oscillation.
3. Only (i) occurs.
4. Only (ii) occurs.



If curve (A) is

$$A\cos(\omega_0 t)$$

which curve is

$$A\cos(2\omega_0 t)?$$

1. (A)
2. (B)
3. (C)
4. None of the above.