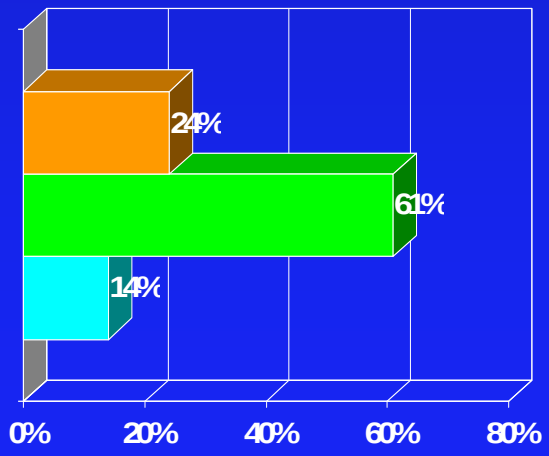
Preflight 1+2

A mass on a spring oscillates back & forth with simple harmonic motion of amplitude A. A plot of displacement (x) versus time (t) is shown below. At what points during its oscillation is the speed of the block biggest?

1. When x = +A or -A (i.e. maximum displacement)
2. When x = 0 (i.e. zero displacement) ← CORRECT
3. The speed of the mass is constant

"At x=0 all spring potential energy is converted into kinetic energy and so the velocity will be greatest at this point."



Its 5:34 in the morning. Answer JUSTIFIED.