$x(t) = 10\,cm \rightarrow 60\,cm$

10 oscillation in 33 s.

a.) Period, $T = \frac{33\,s}{10 \text{ oscillation}} = \underline{3.3\,s}$

$f = \frac{1}{T} = \underline{0.303\,Hz}$

b.) $\omega = 2\pi f = \underline{1.904\ rad/s}$

$x(t)$ goes from $10\,cm \rightarrow 60\,cm$

So $2A = 50\,cm \Rightarrow \underline{A = 25\,cm}$

c.) $x(t) = A\cos(\omega t + \phi_0)$

$v(t) = \frac{dx}{dt} = -\omega A \sin(\omega t + \phi_0)$

$\therefore v_{max} = \omega A = \underline{0.476\ m/s}$

since the sin function varies between ± 1.0