	Fecha

2.7

Datos

$x(t) = bt^2 - ct^3$

$b = 2.4\ m/s^2$

$c = 0.12\ m/s^3$

$$v_{Med} = \frac{\Delta x}{\Delta t} = \frac{x_{(10)} - x_{(0)}}{10 - 0} = \frac{2.4(10)^2 - 0.12(10)^3}{10}$$

$$v_{Med} = \frac{120\ m}{10\ s} = 12\ m/s$$

b) $v = \frac{dx}{dt}$ $\quad v = 2bt - 3ct^2$

$v_{(0)} = 0$

$v_{(5)} = 2(2.4)(5) - 3(0.12)(25) = 24 - 9$

$v_{(5)} = 15\ m/s$

$v_{(10)} = 2(2.4)(10) - 3(0.12)(100) = 42 - 36$

$v_{(10)} = 12\ m/s$

c) $0 = 2bt - 3ct^2$

$t = \frac{2}{3}\left(\frac{b}{c}\right)$

$t = \frac{2}{3}\left(\frac{2.4}{0.12}\right) = 13.6\ s$