b) After how many seconds is the height of the snowball 100 ft, when it is on its way down?

$100 = 100 + 32t - 16t^2$

$0 = 32t - 16t^2$

$0 = t(32 - 16t)$

$t = 0, \quad t = 2$

A) 1.0 B) 3.0 C) 2.5 D) 2.0 E) 1.5

c) Assume that the snowfall falls for another 1.692 seconds, after its position given in part (b). How would you calculate the snowball's velocity when it hits the ground?

It has a negative velocity $= -32$ at this moment. $v = v_0 - 32t$

A) $32 - 32(1.692)$ B) $-32 - 32(1.692)$ C) $100 - 32(1.692) - 16(1.692)^2$

D) $100 + 32(1.692) - 16(1.692)^2$ E) -32

The population of East Bumblebee in recent years is given in the table below.
The last row of the table shows the change in population from the previous year.

Population (P)					
2006	2007	2008	2009	2010	2011
10,000	10,100	10,400	10,900	11,600	12,500
	100	300	500	700	900

Is $\frac{dP}{dt} > 0$, $\frac{dP}{dt} = 0$, or $\frac{dP}{dt} < 0$? (Circle one.)

Is $\frac{d^2P}{dt^2} > 0$, $\frac{d^2P}{dt^2} = 0$, or $\frac{d^2P}{dt^2} < 0$? (Circle one.)

rate of change of population is growing