Mathematics assessment

(does <u>not</u> count towards anything)

1) What's the derivative of $3x^3$ with respect to x?

2) What's the derivative of $3x^3+3y^3$ with respect to x?

3) If $z = a\,x - b\,y$, what does x equal?

4) The figure illustrates the population abundance of a hypothetical species through time. Each letter (A-E) indicates a particular point in time.

a) At what point in time is the population's growth rate the greatest?

b) At what point in time is the population's growth rate equal to zero?

c) At what point in time is the population's per capita rate of growth the greatest?

d) At what point in time is the population's per capita rate of growth equal to zero?