Surface Area

Question

The vector $\vec{v}$ is tangent to the graph of $z = 4 - x^2 - y^2$ at the point $(x, y, 4 - x^2 - y^2)$ and has the form $\vec{v} = \Delta x\,\vec{i} + T\,\vec{k}$ for some Δx and formula T depending on x, y, and Δx. What is the formula for T?

A. 0

B. $-2x$

C. $-2x\Delta x$

D. $-4y\Delta y$

E. Δx