

Answer on Question #78516 – Math – Analytic Geometry

$$\begin{cases} x = y = z - 1 \\ x^2 + y^2 + z^2 + 2(xy + yz + zx) = 0 \end{cases}$$

$$\begin{cases} x = y = z - 1 \\ x^2 + x^2 + (x+1)^2 + 2(x*x + x*(x+1) + x*(x+1)) = 0 \end{cases}$$

$$\begin{cases} x = y = z - 1 \\ 9*x^2 + 6*x + 1 = 0 \end{cases}$$

$$(3x+1)^2 = 0.$$

The system has one solution $A(-1/3; -1/3; -4/3)$.

Thus, Q intersects the cone.

Answer: the statement is false.