Find the absolute maximum value of the function

\[ f(y, z) = xy \]

on the unit disk

\[ D = \{(x, y) \mid x^2 + y^2 \leq 1\}. \]
Could \( f(x, y) = y^2 - x^2 \) have a max or min value on the curve \( y + 2x = x^2 + 1 \) at the point \((1, 0)\)?

A  Yes.
B  No.
C  I don’t know.
Could \( f(x, y) = y^2 - x^2 \) have a max or min value on the curve \( y + 2x = x^2 + 1 \) at the point \( (2, 1) \)?

A  Yes.
B  No.
C  I don’t know.
In the method of Lagrange multipliers, for

\[ \nabla f = \lambda \nabla g \quad \text{and} \quad g = c \]

any solution with \( \lambda = 0 \) should be discarded.

True or False?

A True.

B False.

C I don’t know.
I know I registered my i>clicker, I don’t need to go on to Moodle and make sure my scores are being recorded.

True or False?

A True.
B False.
C I don’t know.