

QUIZ 9

Name _____

1. Find the global maximum and the global minimum for the function $f(x, y) = -2x^2 - 7y^2$. If either (or both) of these quantities fail to exist explain why.

2. A missile has a guidance device which is sensitive to both temperature, $t^\circ\text{C}$, and humidity, h . the range in km over which the missile can be controlled is given by

$$\text{Range} = 27,800 - 5t^2 - 6ht - 3h^2 + 400t - 300h.$$

What are the optimal atmospheric conditions for controlling the missile?