

2020 SPRING CALCULUS 0412: QUIZ 13 (MAY 18, 2020)

NAME:

STUDENTS ID:

1. (5 points) Find the extreme values of $f(x, y, z) = \ln(x^2 + 1) + \ln(y^2 + 1) + \ln(z^2 + 1)$ subject to the constraint $x^2 + y^2 + z^2 = 12$.

2. (5 points) Find the extreme values of $f(x, y, z) = x + y + z$ subject to both constraints $x^2 + z^2 = 2$ and $x + y = 1$.