

Math 3298 Worksheet 47

Group members (2 to 4): _____

- (1) Use the cross product to compute the area of the triangle formed by the vertices $(1, 0, -1)$, $(0, -2, -4)$, and $(4, 5, 6)$.

- (2) Find the equation of the tangent plane to the surface $z = 2x^3y^2 - 4y$ at the point $(1, 2, 0)$.

- (3) Convert the integral

$$\int_0^1 \int_0^{\sqrt{1-x^2}} \int_0^y xz \, dz \, dy \, dx$$

to cylindrical coordinates and evaluate it.