

MATH 116-02 QUIZ 15

Surname\ Name:

ID:

Problem. Use Stokes' Theorem to evaluate

$$\oint_C \mathbf{F} \cdot d\mathbf{r},$$

where $\mathbf{F} = -y^3\mathbf{i} + x^3\mathbf{j} - z^3\mathbf{k}$ and C is the curve of intersection of the cylinder $x^2 + y^2 = 1$ and the plane $2x + 2y + z = 3$ oriented counterclockwise as viewed from above.