

Quiz 2 Calculus 3 Due by 11/4/20

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Compute $\int_C \vec{F} \cdot d\vec{r}$ for the vector field $\vec{F}(x, y) = xy\vec{i} - y\vec{j}$ and with C a line segment from $(1,2)$ to $(3,0)$.

2. Compute $\int_C \vec{F} \cdot d\vec{r}$ for the vector field $\vec{F}(x, y) = \langle 5x^4 y^2, 2x^5 y \rangle$ and with C the counterclockwise arc of a circle beginning at $(2, 0)$ and ending at $(-\sqrt{2}, \sqrt{2})$.