

Quiz 4 Calculus 3 11/13/12

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

1. Let $\mathbf{F}(x,y) = \langle 5x^4y^2, 2x^5y \rangle$, and C be the line segment from $(2,-1)$ to $(0,2)$.

Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$.

2. Let $\mathbf{F}(x,y) = \langle 4x - 1, y \rangle$. Compute $\int_C \mathbf{F} \cdot d\mathbf{r}$ for C the second-quadrant portion of a circle with radius 3 centered at the origin, traversed counterclockwise.