Quiz 2   Calculus 3   11/7/16

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

1. Let $\mathbf{F}(x,y) = \langle 5x^4y, x^5 \rangle$, and C be the line segment from $(-2,1)$ to $(2,3)$. Compute $\displaystyle\int_C \mathbf{F} \cdot d\mathbf{r}$.

2. Let $\mathbf{F}(x,y) = \langle x^2, xy \rangle$. 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.