

“QUIZ” for Nov. 16, 2006

NAME: (print!) _____ **Section:** _____

E-MAIL ADDRESS: (print!) _____

1. Use Green's Theorem to evaluate $\int_C \mathbf{F} \cdot d\mathbf{r}$, (Check orientation of the curve before applying the theorem).

$$\mathbf{F}(x, y) = \langle x^2 + 2y^2, y^2 + 3x^2 \rangle \quad ,$$

where C consists of the circumference of the the rectangle whose vertices are $(0, 0)$, $(0, 2)$, $(3, 2)$, $(3, 0)$, and the direction is in the above order (start at $(0, 0)$, go to $(0, 2)$, then go to $(3, 2)$, then go to $(3, 0)$ and finally back to $(0, 0)$).