Quiz 8 **Time: 10 minutes**

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1. An object moves along the parabola $y = x^2$ from $(0,0)$ to $(2,4)$. One of the forces acting on the object is $\mathbf{F}(x,y) := (x + 2y)\mathbf{i} + (2x + y)\mathbf{j}$. Calculate the work done by $\mathbf{F}$.