MATH 335 Quiz 6 Name:

Show all work. 20 points.

1) Find the equation of the least squares line that best fits $(-1, 0)$, $(0, 1)$, $(1, 2)$, $(2, 4)$.

2) Show that if A is an $n \times n$ symmetric matrix, then $(A\mathbf{x}) \cdot \mathbf{y} = \mathbf{x} \cdot (A\mathbf{y})$ for all $\mathbf{x}, \mathbf{y} \in \mathbb{R}^n$.