

Determine whether the vectors are parallel, orthogonal or neither. If they are orthogonal prove using the dot product.

- $u = \langle -4, -1 \rangle$ $v = \langle 1, -4 \rangle$
- $u = \langle 2, 5 \rangle$ $v = \left\langle \frac{10}{3}, \frac{4}{3} \right\rangle$
- $u = \langle 2, -7 \rangle$ $v = \langle -4, 14 \rangle$

A) Graph the following parametric equation

$$x = 2t + 1 \quad y = t^2 - 2 \quad -2 \leq t \leq 2$$