1. u = [-1 0 1] and v = $\begin{bmatrix} 2 \\ 4 \\ 6 \end{bmatrix}$

a. u^t = $\begin{bmatrix} -1 \\ 0 \\ 1 \end{bmatrix}$

b. v^t = [2 4 6]

c. u v = -2 + 0 + 6 = 4.

d. v x u = $\begin{bmatrix} -2 & 0 & 2 \\ -4 & 0 & 4 \\ -6 & 0 & 6 \end{bmatrix}$