NOTE THAT THE SYMBOL " $\bullet$ " REPRESENTS DOT PRODUCT
AND THE SYMBOL " $\times$ " REPRESENTS CROSS PRODUCT.

II. FOR THE VECTORS $\vec{v} = \langle -3,4 \rangle$ & $\vec{w} = \langle -6,-2 \rangle$ COMPUTE THE INDICATED ITEMS, SHOWING ALL YOUR WORK. IN A NEAT AND ORDERLY FASHION.
1. $\|\vec{w}\|$
2. $-5\vec{v} - 4\vec{w}$
3. $\|\vec{v} + \vec{w}\|$

II. FOR THE VECTORS $\vec{v} = -2\vec{i} + 8\vec{j}$, $\vec{w} = 8\vec{j}$ & $\vec{t} = 4\vec{i} - \vec{j}$ COMPUTE THE INDICATED ITEMS, SHOWING ALL YOUR WORK. IN A NEAT AND ORDERLY FASHION.
4. $\vec{w} \bullet \vec{t}$
5. $(\vec{v} \bullet \vec{w})\vec{t}$
6. $\vec{t} \bullet \vec{0}$
7. Find θ, the angle between vectors $\vec{v}$ & $\vec{t}$. Express your answer in DEGREES, rounded to one decimal place.
8. Find a unit vector in the same direction as vector $\vec{v}$
9. Present a computation to determine whether the vectors $\vec{w}$ & $\vec{t}$ are orthogonal

III. FOR THE VECTORS $\vec{v} = 5\vec{i} - 2\vec{j} - 3\vec{k}$ $\vec{w} = -\vec{i} + \vec{j} - 3\vec{k}$ $\vec{t} = 2\vec{i} - \vec{k}$, COMPUTE THE INDICATED ITEMS, SHOWING ALL YOUR WORK IN A NEAT AND ORDERLY FASHION.
10. $\|\vec{v} - \vec{w}\|$
11. $2\vec{t} \bullet 3\vec{w}$
12. $\vec{v} \times \vec{w}$

13. FIND A VECTOR WHICH IS ORTHOGONAL TO BOTH $\vec{w}$ AND $\vec{t}$.
14. FIND θ, the angle between vectors $\vec{v}$ & $\vec{t}$. Express your answer in DEGREES, rounded to one decimal place.