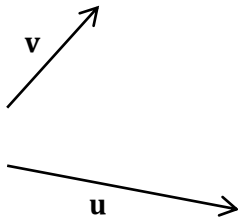


Name: _____

Problem 1 (10 points)

a) Compute the sum and the difference of the vectors $\langle 9, 3, -1 \rangle$ and $\langle 2, -2, 10 \rangle$.

b) Copy the vectors in the figure and use them to draw the vectors $\mathbf{u} + \mathbf{v}$ and $\mathbf{u} - \mathbf{v}$.



Problem 2 (10 points)

a) Find an equation of the sphere with radius 3 and center $C(2, 3, 4)$.

b) Find an equation of the sphere through the point $A(5, 4, 2)$ with center $C(2, 3, 4)$.