

Exercise 1. The system of vectors $\{\underline{u}, \underline{v}, \underline{w}\}$ is a basis of R^3 . Determine whether system of vectors $\{2\underline{u} - \underline{v}, \underline{u} + 2\underline{v} + 5\underline{w}, 3\underline{v} - 2\underline{w}\}$ is also a basis of R^3 .

Exercise 2. Find the angle between the vectors: $[\sqrt{11}, -2, 1]$ i $[0, 3, -4]$.

Exercise 3. Find the value of x , for which the angle between the vectors: $[-2x, 3, 2]$ i $[x, 2x, 4]$ is $\frac{\pi}{2}$.

Exercise 4. Find the basis of R^3 in which coordinates of the vector $\underline{v} = [2, -1, 4]$ are $(-2, 3, 0)$.