<u>Ex:</u> Find $\boldsymbol{a} + 2\boldsymbol{b}$, $\|\boldsymbol{a}\|$, and $\hat{\boldsymbol{a}}$ if $\boldsymbol{a} = [2, -1, -2]$ and $\boldsymbol{b} = [1, 4, -2]$.

Ex: Given $A(4, -1, 0)$ and $B(1, 3, -2)$, find $\overrightarrow{BA}$.

Ex: Given $a = -2i + 3j + k$ and $b = i + j - 4k$, find $a - 2b$ and $\|b\|$.

Ex: Find the angle between the vectors $a = [3,2,-1]$ and $b = [-2,2,4]$.

Ex: Find the vector projection of $b = [3,1,1]$ on $a = [4, -2, -1]$.

Ex: A force $F = 5i + 3j - 2k$ is applied to an object which moves it from the point $A(1,1,1)$ to the point $B(5,-1,2)$. Determine the work done by the force F.