Assignment 1

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***Abstract*—This document finds a parallel unit vector for a given vector**

Download all python codes from

https://github.com/Zeeshan−IITH/IITH−EE5609/new/master/codes

and latex-tikz codes from

https://github.com/Zeeshan−IITH/IITH−EE5609

1 Problem

Find a unit vector parallel to $2\bar{a}$-$\bar{b}$+$3\bar{c}$

$\bar{a}=\begin{pmatrix}1\\1\\1\end{pmatrix}$, $\bar{b}=\begin{pmatrix}2\\-1\\3\end{pmatrix}$, $\bar{c}=\begin{pmatrix}1\\-2\\1\end{pmatrix}$

2 Explanation

First calculate $2\bar{a}$-$\bar{b}$+$3\bar{c}$.Then divide the resultant vector with its magnitude,that will be a unit vector parallel to $2\bar{a}$-$\bar{b}$+$3\bar{c}$