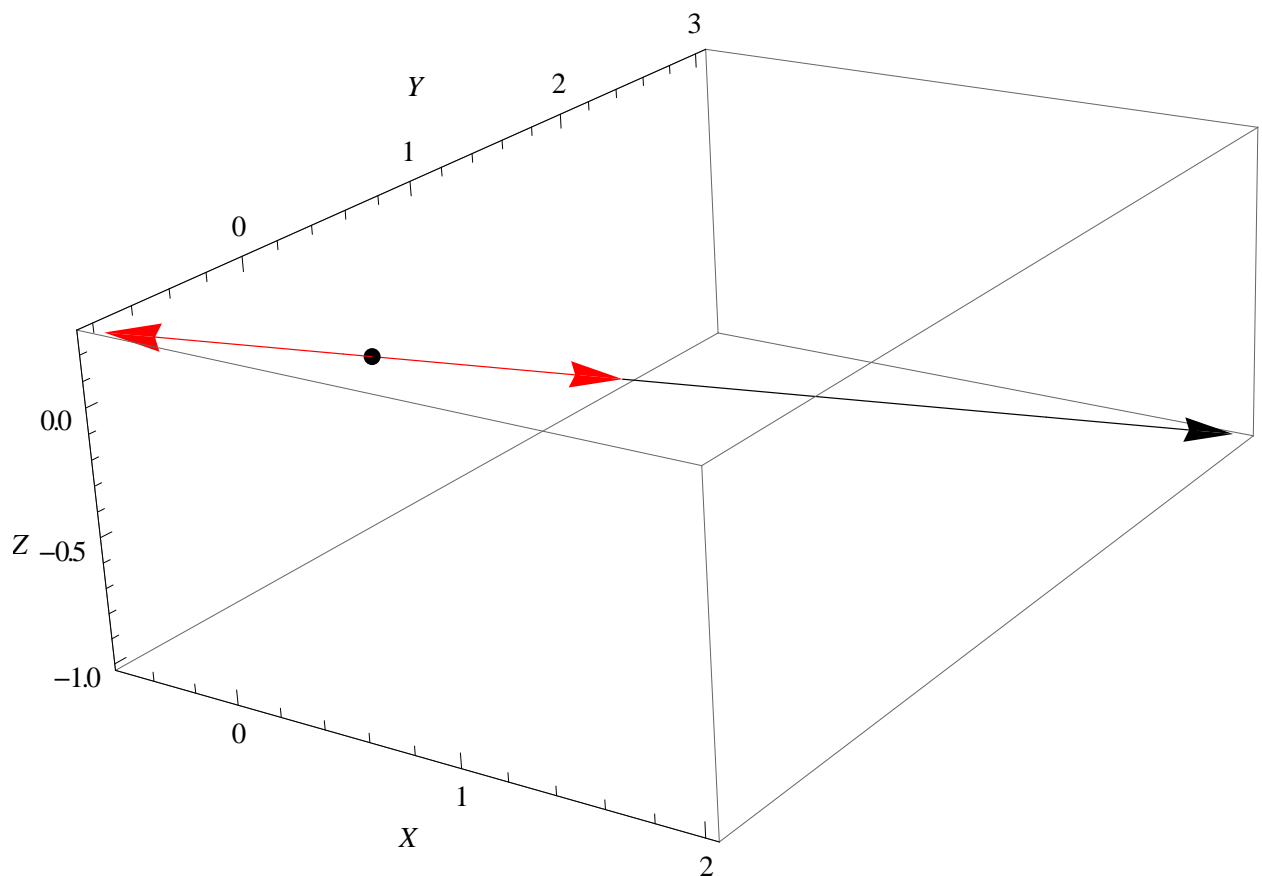


Answer on Question#51714 - Math - Vector Calculus

a vector = $2i+3j-k$, find a unit vector parallel to this vector ? should i use (\pm) ? unit vector = $\pm(2i+3j-k)/\sqrt{14}$.?

i m confused to use (\pm) . if (\pm) needed , then why ?? someone says opposite direction that's why .please show me the two directions for using (\pm) in diagram

Solution:



In the diagram above two red vectors – are unit vectors parallel to the given vector (the black one in the diagram). The big point in the diagram denotes the origin. These two red vectors are both parallel to the given vector, but they have opposite directions. So it's more properly to use (\pm) .

Answer: unit vector = $\pm(2i+3j-k)/\sqrt{14}$.