Answer on Question #51717, Math, Vector Calculus

if angle between a vector and b vector be 30 degree , then if i want to find the perpendicular unit vector , then the new vector will be perpendicular to both a and b . how is it possible. in figure, if angle between a vector and b vector be 30 degree, then the angle between a and the new vector be 90 and b and the new vector be 60 . then how the new vector will be perpendicular to both a and b? please explain me with figure

Answer:

Do not forget that the space is three-dimensional. Vectors $\vec{a}$ and $\vec{b}$ are in the same plane. The vector $\vec{c}$ perpendicular to the vectors $\vec{a}$ and $\vec{b}$ (see Fig.1).

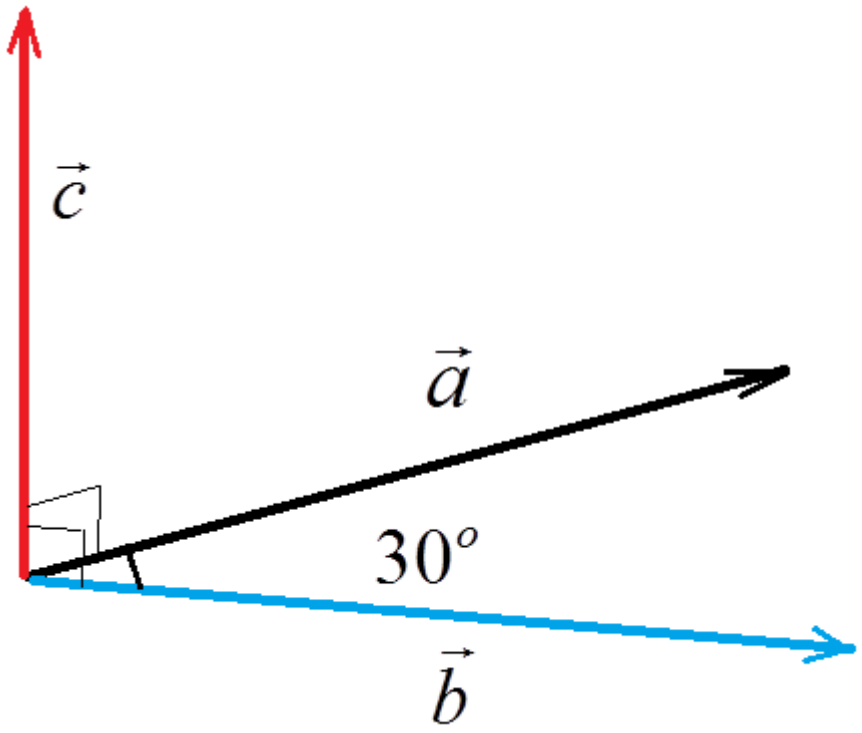

Fig.1

Also, vector c can be expressed as a cross product of vectors a and b.,