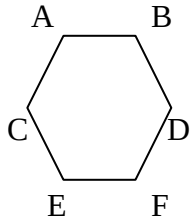
MCV4U Quiz Name: _____

The diagram shows a regular hexagon. Write a single vector that is equivalent to each expression.



$CA + AB$ _____

$EF - AB$ _____

Vectors $\vec{u}$ and $\vec{v}$ are perpendicular, where $\vec{u} = (3,-4)$ and $\vec{v} = (6,k)$. What is the value of *k*?

_____

Find $\overrightarrow{GE} - \overrightarrow{TE} - \overrightarrow{GD}$ _____

Given $\vec{u} = (5,-2)$ and $\vec{v} = (8,5)$ determine $4\vec{u} - 2\vec{v}$ _____

Determine the magnitude of the vector joining the points **A**(1,3,-7) and **B**(0,2,3) _____

A 50 kg sign is being suspended from 2 wires of length 4 m and 7 m which are attached to two points that are 8 m apart. Find the tensions in the wires.

Determine the angle between the vectores $\vec{u} = (3,-4,-2)$ and $\vec{v} = (6,-1,5)$.

Find the resultant of the following forces:

275 N at $S50°W$
195 N at $N65°E$
225 N at $N15°W$