King Fahd University of Petroleum and Minerals

MATH 201 QUIZ #3 Term 161

Name:	Serial:	ID:

Q1. Find a vector that has the **same direction** as $< 2, -4, -2 >$ but has length 12.

Q2. Let C be the point on the line segment AB that is **twice** as far from B as it is from A. Show that

$$\overrightarrow{OC} = \frac{2}{3}\overrightarrow{OA} + \frac{1}{3}\overrightarrow{OB}$$

Q3 Find the vector projection of $\vec{b} =< 0,1,\frac{1}{2} >$ onto $\vec{a} =< 2,-1,4 >$

Q4 Find the volume of the parallelepiped determined by the vectors $\vec{a} =< 1,2,3 >$, $\vec{b} =< -1,1,2 >$ and $\vec{c} =< 2,1,4 >$