The Cross Product

Practice Your Understanding

Name: ―――――――――

Date: ―――――――――

1. When calculating the cross product of vectors, what equation is used to calculate the resulting vector? Write the formula below.

2. Using the equation you wrote down above, calculate the cross product of the vector $\vec{A} = 3.3\hat{i} + 2.5\hat{j} - 4.9\hat{k}$ and the vector $\vec{B} = -4.6\hat{i} + 9.7\hat{j} - 6.1\hat{k}$. What resulting vector do you get? Write down your answer and show your work below:

3. Using the same equation from Problem 1, calculate the cross product for the vector $\vec{C} = 5.4\hat{i} + 7.8\hat{j} + 0\hat{k}$ and the vector $\vec{D} = 3.2\hat{i} - 1.7\hat{j} + 0\hat{k}$. What resulting vector do you get? Write whether or not the vector goes into or out of the page. For out of the page, write $\odot$. For into the page, write $\otimes$. What is the area of the parallelogram formed by the vectors $\vec{C}$ and $\vec{D}$? Write down your answer and show your work below.

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