Cross-Product

(Vector Product)
Worksheet 1

*To view the **lesson notes**, **tutorial(s)** and **answer key** for this worksheet: scan the **QR Code** in the upper right hand corner or **click on the link in the header** of this page.*

1. Find $\overrightarrow{a} \times \overrightarrow{b}$, given $\overrightarrow{a} = \begin{pmatrix} 2 \\ 3 \\ 4 \end{pmatrix}$ and $\overrightarrow{b} = \begin{pmatrix} 5 \\ -2 \\ 1 \end{pmatrix}$.

2. Find $\overrightarrow{c} \times \overrightarrow{d}$, given $\overrightarrow{c} = 3\vec{i} + 5\vec{j} - \overrightarrow{k}$ and $\overrightarrow{d} = \vec{i} - 4\vec{j} + 2\overrightarrow{k}$.

3. Find $\overrightarrow{u} \times \overrightarrow{v}$, given $\overrightarrow{u} = 6\vec{i} - 3\overrightarrow{k}$ and $\overrightarrow{v} = -2\vec{i} + \vec{j} + 5\overrightarrow{k}$.

4. Find $\overrightarrow{a} \times \overrightarrow{b}$, given $\overrightarrow{a} = \begin{pmatrix} -2 \\ 0 \\ 6 \end{pmatrix}$ and $\overrightarrow{b} = \begin{pmatrix} 4 \\ 1 \\ 3 \end{pmatrix}$.

5. Find $\overrightarrow{m} \times \overrightarrow{n}$, given $\overrightarrow{m} = -3\vec{i} + 5\vec{j} - \overrightarrow{k}$ and $\overrightarrow{n} = 4\vec{j} + 7\overrightarrow{k}$.

6. Find $\overrightarrow{u} \times \overrightarrow{v}$, given $\overrightarrow{u} = \begin{pmatrix} 8 \\ -1 \\ -2 \end{pmatrix}$ and $\overrightarrow{v} = \begin{pmatrix} -3 \\ -2 \\ -4 \end{pmatrix}$.

7. Find $\overrightarrow{a} \times \overrightarrow{b}$, given $\overrightarrow{a} = 3\vec{i} - 2\vec{j}$ and $\overrightarrow{b} = 5\vec{i} + \vec{j}$.

8. Find $\overrightarrow{c} \times \overrightarrow{d}$, given $\overrightarrow{c} = \begin{pmatrix} 2 \\ 3 \\ 1 \end{pmatrix}$ and $\overrightarrow{d} = \begin{pmatrix} 0 \\ 3 \\ 5 \end{pmatrix}$.