Practice worksheet | Vectors in three dimensions

Cross product and determinant calculations

Name: _____ Date: _____

6 questions | 12 marks

1. Find $(1, 0, 1) \times (0, 2, 1)$. [2 marks]

2. Find $(0, 2, 1) \times (1, 0, 1)$. [2 marks]

3. Find $\mathbf{i} \times \mathbf{j}$ and $\mathbf{j} \times \mathbf{i}$. [2 marks]

4. Is $(3, 0, -1)$ perpendicular to $(1, 2, 3) \times (2, -1, 0)$? [2 marks]

5. Find the determinant with rows $(1, 2, 0)$, $(0, 1, 3)$, $(2, 0, 1)$. [2 marks]

6. Find the volume spanned by $(2, 0, 0)$, $(0, 3, 0)$, $(0, 0, 4)$. [2 marks]