Geometric areas and perpendicular vectors

Name: _____ Date: _____

6 questions | 12 marks

1. Find the parallelogram area spanned by $(1, 0, 0)$ and $(0, 2, 2)$. [2 marks]

2. Find triangle area for $A(1, 0, 0)$, $B(3, 0, 0)$, $C(1, 4, 0)$. [2 marks]

3. Give a length-5 vector perpendicular to $(1, 0, 0)$ and $(0, 1, 0)$. [2 marks]

4. Find triangle area for sides $(1, 2, 0)$ and $(0, 1, 3)$. [2 marks]

5. Explain why replacing b by $3b$ triples the spanned parallelogram area. [2 marks]

6. Find a unit normal to sides $(2, 0, 0)$, $(0, 3, 4)$ with positive z component. [2 marks]