Dot product and projection

Name: _____ Date: _____

6 questions | 12 marks

1. Calculate $(2, -1, 3) \cdot (4, 2, -2)$. [2 marks]

2. Find the angle between (1,0,0) and (1,1,1), to one decimal degree. [2 marks]

3. Project (3,4,0) along (1,0,0). [2 marks]

4. Find the component of (2,-1,2) perpendicular to (1,0,0). [2 marks]

5. Find k for perpendicular vectors (1,k,2) and (3,2,-1). [2 marks]

6. Force (6,2,-1) N acts through displacement (3,-1,2) m. Find the work. [2 marks]