Practice worksheet | Vector calculus

Coordinates varying at constant rates

Name: _____ Date: _____

6 questions | 12 marks

1. Write position from initial (3, 2) m and velocity (4, -1) m/s. [2 marks]

2. Find speed for $(5 + 8t,\ -2 + 6t)$ m. [2 marks]

3. A is at $(t, 2t)$ and B at $(4 - t, 4)$. Find collision time. [2 marks]

4. A is at (t, t) and B at $(2 - t, 3 - t)$. Do they collide? [2 marks]

5. A particle moves from (1, 1, 2) to (7, -3, 2) in 2 s. Find constant velocity. [2 marks]

6. Find distance travelled by $(1 + 2t, 3 + t)$ on $0 \leq t \leq 4$. [2 marks]