Practice worksheet | Vector calculus

Vector-valued position functions

Name: _____ Date: _____

6 questions | 12 marks

1. Evaluate $r(3)$ for $(2t, t^2 - 1, 5)$. [2 marks]

2. Find displacement from 0 to 1 for (t, t^2, t^3). [2 marks]

3. Find distance from the origin for $(3\cos t, 3\sin t, 2)$. [2 marks]

4. Find endpoint separation between $(1, 2, 3)$ and $(4, 6, 3)$. [2 marks]

5. Identify the Cartesian path of $(t^2, 2t)$. [2 marks]

6. Give a position function for the line through $(1, 0, 2)$ with direction $(2, -1, 3)$. [2 marks]