Practice worksheet | Vectors in three dimensions

Vector/Cartesian equations of lines

Name: _____ Date: _____

6 questions | 12 marks

1. Write a line through $(2, -1, 4)$ parallel to $(1, 3, -2)$. [2 marks]

2. Find the point at $t = -2$ on $(1, 0, 3) + t(2, -1, 1)$. [2 marks]

3. Is $(3, 2, 4)$ on $(1, 0, 1) + t(1, 1, 2)$? [2 marks]

4. Convert $(1, 2, 3) + t(0, 4, -2)$ to Cartesian form. [2 marks]

5. Parametrise the segment from $(0, 1, 2)$ to $(4, -1, 6)$. [2 marks]

6. Lines use points $(1, 2, 3)$ and $(3, 1, 7)$, and directions $(2, -1, 4)$ and $(-4, 2, -8)$. Are they the same line? [2 marks]