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| **Topic 3: Geometry and Trigonometry** | **Vectors in Component Form** | | |
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| 1. The position vectors of points A and B are and  respectively.     1. Find the vector equation of the line that passes through A and B.    2. The line through A and B is perpendicular to the vector . Find the value of . | | | (4 marks)   (3 marks) |
| Mark scheme:   1. or or The column vector form for each of the equations above. | | (M1)(A1)   (A1)(A1)  (A1) for correct dot product (M1) setting it equal to zero (A1) | |