Practice worksheet | Vectors in two dimensions

Position and displacement vectors

Name: _____ Date: _____

6 questions | 15 marks

1. $A = (3, 1)$, $B = (-2, 7)$. Find $\overrightarrow{AB}$. [2 marks]

2. A particle starts at $(4, -3)$ and is displaced by $(-6, 5)$. Find its final position. [2 marks]

3. Find the midpoint of $(7, -4)$ and $(-1, 6)$. [2 marks]

4. $A = (0, 2)$, $B = (12, 8)$. Find P for $AP : PB = 1 : 2$. [3 marks]

5. $A = (2, 1)$, $B = (5, 3)$. Find the point with $t = 2$ in $\mathbf{a} + t(\mathbf{b} - \mathbf{a})$ and explain its position. [3 marks]

6. An origin is shifted by vector $\mathbf{c}$. Prove that the displacement between A and B stays unchanged. [3 marks]