Practice worksheet | Vectors in two dimensions

Perpendicularity

Name: _____ Date: _____

6 questions | 14 marks

1. Are $(2, 3)$ and $(6, -4)$ perpendicular? [2 marks]

2. Find k if $(k, 5)$ is perpendicular to $(2, -6)$. [2 marks]

3. Find a unit vector perpendicular to $(3, 4)$. [2 marks]

4. $A=(0,0)$, $B=(2,1)$, $C=(1,3)$. Decide whether angle ABC is a right angle. [3 marks]

5. For $u=(t,2)$, $v=(3,t)$, find all real t making u perpendicular to v. [3 marks]

6. Explain why $\mathbf{0}\cdot(1,2)=0$ does not show a right angle. [2 marks]