Practice worksheet | Vectors in two dimensions

# Magnitude and direction

Name: _____ Date: _____

6 questions | 15 marks

**1.** Find the magnitude of $(5, 12)$. [2 marks]

**2.** Find the exact magnitude and direction of $(-4, 4)$. [2 marks]

**3.** A displacement is $(8, -6)$ m. Find its magnitude and its direction south of east to $0.1^\circ$. [3 marks]

**4.** A non-zero vector has magnitude $10$ and direction $60^\circ$. Find its exact components. [3 marks]

**5.** Find $k$ if $(k, 4)$ has magnitude $5$. [3 marks]

**6.** Explain why $(0, 0)$ cannot be assigned a unique direction angle. [2 marks]