Practice worksheet | Differentiation and applications

Derivatives of sine/cosine/tangent

Name: _____ Date: _____

6 questions | 13 marks

1. Differentiate $5\sin x + 2\cos x$. [2 marks]

2. Differentiate $\tan(3x)$. [2 marks]

3. Find the gradient of $y = \cos(2x)$ at $x = \pi/4$. [2 marks]

4. Differentiate $x\sin x$. [2 marks]

5. Differentiate $\cos^3 x$. [2 marks]

6. For $h(t) = 5 + 2\cos(\pi t/6)$ metres, find and interpret $h'(3)$ in m/s. [3 marks]