Practice worksheet | Further trigonometry

Double-angle identities and derived forms

Name: _____ Date: _____

6 questions | 12 marks

1. If $\cos x = \frac{3}{5}$, calculate $\cos 2x$. [2 marks]

2. If $\tan x = \frac{1}{2}$, calculate $\tan 2x$. [2 marks]

3. Rewrite $\cos^2(3x)$ using a multiple-angle cosine. [2 marks]

4. Find $\cos(\frac{\pi}{8})$ exactly. [2 marks]

5. Solve $\cos 2x = 1$ on $[0, 2\pi)$. [2 marks]

6. For x in quadrant II with $\sin x = \frac{3}{5}$, find $\sin 2x$. [2 marks]