Practice worksheet | Integration techniques and applications

Inverse-trigonometric derivatives and integrals

Name: _____ Date: _____

6 questions | 12 marks

1. Find $\int \frac{3}{9+x^2}\,dx$. [2 marks]

2. Find $\int \frac{2}{\sqrt{1-4x^2}}\,dx$. [2 marks]

3. Find $\int \frac{1}{1+9x^2}\,dx$. [2 marks]

4. Evaluate $\int_0^{\frac{1}{2}} \frac{1}{\sqrt{1-x^2}}\,dx$. [2 marks]

5. Find $\int \frac{1}{x^2+16}\,dx$. [2 marks]

6. Differentiate $\arccos\left(\frac{x}{2}\right)$ on $-2 < x < 2$. [2 marks]