Practice worksheet | Integration techniques and applications

Selecting/combining methods

Name: _____ Date: _____

6 questions | 12 marks

1. Integrate $\frac{\ln x}{x}$ for $x > 0$. [2 marks]

2. Integrate $\frac{x}{\sqrt{1-x^2}}$ on $-1 < x < 1$. [2 marks]

3. Integrate xe^{2x}. [2 marks]

4. Integrate $\cos^2 x \sin x$. [2 marks]

5. Explain whether xe^{x^2} and xe^x should use the same first method. [2 marks]

6. Verify that $e^x(x^2 - 2x + 2)$ integrates x^2e^x. [2 marks]