Practice worksheet | Integration techniques and applications

Selecting/combining methods

Name: _____ Date: _____

6 questions | 12 marks

1. Integrate $\ln x/x$ for x>0. [2 marks]

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

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

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

5. Explain whether x exp(x squared) and x exp(x) should use the same first method. [2 marks]

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