Practice worksheet | Integration techniques and applications

Further antiderivatives

Name: _____ Date: _____

6 questions | 12 marks

1. Find $\int x^{\frac{3}{2}}\,dx$ for $x > 0$. [2 marks]

2. Find $\int (2e^{3x} + 4)\,dx$. [2 marks]

3. Find $\int \cos(3x)\,dx$. [2 marks]

4. Find $\int\left(\frac{5}{x}-\frac{2}{x^3}\right)dx$. [2 marks]

5. Given $F'=6x$ and $F(1)=5$, find F. [2 marks]

6. Check whether $2\sqrt{x}+C$ is an antiderivative of $\frac{1}{\sqrt{x}}$ for $x>0$. [2 marks]