

8		<p>let $u = x^2, u' = 2x, v' = e^{2x}, v = \frac{1}{2}e^{2x}$</p> $\int x^2 e^{2x} dx = \frac{1}{2}x^2 e^{2x} - \int 2x \cdot \frac{1}{2}e^{2x} dx = \frac{1}{2}x^2 e^{2x} - \int x e^{2x} dx$ <p>let $u = x, u' = 1, v' = e^{2x}, v = \frac{1}{2}e^{2x}$</p> $\int x e^{2x} dx = \frac{1}{2}x e^{2x} - \int \frac{1}{2}e^{2x} dx$ $= \frac{1}{2}x e^{2x} - \frac{1}{4}e^{2x} (+c)$ <p>so $\int x^2 e^{2x} dx = \frac{1}{2}x^2 e^{2x} - \frac{1}{2}x e^{2x} + \frac{1}{4}e^{2x} + c$</p>	<p>M1A1</p> <p>A1</p> <p>M1</p> <p>A1</p> <p>A1</p> <p>A1</p> <p>[7]</p>	<p>1.1a</p> <p>1.2</p> <p>1.1</p> <p>1.1a</p> <p>1.1</p> <p>1.1</p> <p>2.5</p>	<p>Do not award if no '+ c'</p>	
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