Use Substitution to Evaluate:

1. $\int_0^{\frac{\pi}{2}} cos\,3x\ dx \quad = -1/3$

2. $\int x\,e^{x^2}\ dx \quad = .5\,e^{x^2} + C$

3. $\int_0^2 (3x-1)^5\ dx \quad = 868$

4. $\int sec^2(4x)\ dx \quad = .25\,tan(4x) + C$

5. $\int_1^5 \sqrt{2x-1}\ dx \quad = 26/3$

6. $\int \frac{x^2}{\sqrt{x^3+1}}\ dx \quad = (2/3)(x^3+1)^{1/2} + C$

7. $\int \frac{1}{\sqrt{x}}\,sin(\sqrt{x})\ dx \quad = -2\,cos\sqrt{x} + C$

8. $\int \frac{x^3}{x^4+3}\ dx \quad = .25\,ln(x^4+3) + C$

9. $\int \frac{x^4+3}{x^3}\ dx \quad = \frac{x^2}{2} - \frac{3}{2\,x^2} + C$

10. $\int \frac{cos\,x}{sin\,x}\ dx = \quad ln|sin\,x| + C$