

Name: _____ Score: _____

Teacher: _____ Date: _____

Integration by substitution

Evaluate each of the following integrals

1. $\int (8x - 12)(4x^2 - 12x)^4 dx$	2. $\int 3t^{-4}(2 + 4t^{-3})^{-7} dt$
3. $\int (3 - 4w)(4w^2 - 6w + 7)^{10} dw$	4. $\int 5(z - 4)\sqrt[3]{z^2 - 8z} dz$
5. $\int 90x^2 \sin(2 + 6x^3) dx$	6. $\int (15x^{-2} - 5x) \cos(6x^{-1} + x^2) dx$
7. $\int (7y - 2y^3)e^{y^4 - 7y^2} dy$	8. $\int \frac{4w + 3}{4w^2 + 6w - 1} dw$
9. $\int (\cos(3t) - t^2)(\sin(3t) - t^3)^5 dt$	10. $\int 4\left(\frac{1}{z} - e^{-z}\right) \cos(e^{-z} + \ln z) dz$