Hwk U-Substitution Non-Trig & Trig

Date_____ Period_____

Evaluate each indefinite integral. Use the provided substitution when provided.

1) $\displaystyle \int_{-1}^{0} 9x^2 \left(3x^3 - 2\right)^2 \, dx; \ u = 3x^3 - 2$

2) $\displaystyle \int_{-2}^{1} -\frac{24x}{\left(4x^2 + 2\right)^2} \, dx; \ u = 4x^2 + 2$

3) $\displaystyle \int_{-1}^{0} 6x^2 \left(2x^3 - 1\right)^3 \, dx$

4) $\displaystyle \int_{-2}^{0} \frac{8x}{\left(2x^2 + 4\right)^2} \, dx$

5) $\displaystyle \int 4x\sin\left(2x^2 + 3\right) \, dx; \ u = 2x^2 + 3$

6) $\displaystyle \int -12x \cdot \sec^2\left(2x^2 + 3\right) \, dx$

7) $\displaystyle \int -60x^2 \cdot \csc^2\left(4x^3 + 3\right) \, dx$