St. 20 Trig and Integration - LVL2

Date_____ Period____

Evaluate each indefinite integral. Use the provided substitution.

1) $\int 50x\sin\left(5x^2+4\right)dx;\ u=5x^2+4$

2) $\int 60x^4\cdot\sec^2\left(3x^5+1\right)dx;\ u=3x^5+1$

3) $\int -60x^3\cdot\csc^2\left(3x^4+5\right)dx;\ u=3x^4+5$

4) $\int -8x\sec\left(4x^2-3\right)\cdot\tan\left(4x^2-3\right)dx;\ u=4x^2-3$

5) $\int -6x^2\csc\left(2x^3-1\right)\cdot\cot\left(2x^3-1\right)dx;\ u=2x^3-1$

6) $\int 75x^2\cdot\csc^2\left(5x^3-3\right)dx;\ u=5x^3-3$

7) $\int -24x\cdot\sec^2\left(3x^2-5\right)dx;\ u=3x^2-5$

8) $\int -60x^3\cos\left(5x^4-3\right)dx;\ u=5x^4-3$

9) $\int -30x\cos\left(5x^2-2\right)dx;\ u=5x^2-2$

10) $\int -30x^2 \sec\left(2x^3 + 5\right) \cdot \tan\left(2x^3 + 5\right) dx;\ u = 2x^3 + 5$

Answers to St. 20 Trig and Integration - LVL2 (ID: 1)

1) $-5\cos\left(5x^2 + 4\right) + C$
2) $4\tan\left(3x^5 + 1\right) + C$
3) $5\cot\left(3x^4 + 5\right) + C$
4) $-\sec\left(4x^2 - 3\right) + C$
5) $\csc\left(2x^3 - 1\right) + C$
6) $-5\cot\left(5x^3 - 3\right) + C$
7) $-4\tan\left(3x^2 - 5\right) + C$
8) $-3\sin\left(5x^4 - 3\right) + C$
9) $-3\sin\left(5x^2 - 2\right) + C$
10) $-5\sec\left(2x^3 + 5\right) + C$