Name: _____   AP Calculus AB, Substitution Practice Worksheet

1. $\int x(x^2 + 3)^5 dx$

2. $\int (\sin x)\cos^3(x)dx$

3. $\int (\sec(5x)\tan(5x)dx$

4. $\int \dfrac{(2x-1)dx}{x^2 - x + 5}$

5. $\int \dfrac{x^2 dx}{(x^3 - 4)^2}$

6. $\int \dfrac{dx}{4 + 16x^2}$

7. $\int (4x - 3)^9 dx$

8. $\int \cos x\sqrt{\sin x}dx$

9. $\int 4(6x - 1)^4 dx$

10. $\int (6x^2 - 1)(2x^3 - x)^3 dx$

11. $\int \dfrac{x^3}{(5x^4 + 2)^3}dx$

12. $\int \cos^5(3x)\sin(3x)dx$

13. $\int 2xe^{3x^2} dx$

14. $\int \dfrac{xdx}{\sqrt{2x^2 + 5}}$

15. $\int \tan^6(x)\sec^2(x)dx$

16. $\int \sec^6(x)\tan(x)dx$

17. $\int (2x^3 - 1)(x^4 - 2x)^5 dx$

18. $\int \dfrac{2xdx}{4x^2 - 3}$

19. $\int \dfrac{dx}{\sqrt{1 - 9x^2}}$

20. $\int \dfrac{2\cos x}{\sin x}dx$

21. $\int \dfrac{\sqrt{\ln x}}{x}dx$