SUBSTITUTION WORKSHEET

MATH 3 / FALL 2012

1. $\int e^{7x}\,dx$

2. $\int \cos(x/2)\,dx$

3. $\int e^{x^2}x\,dx$

4. $\int x\sqrt{1-x^2}\,dx$

5. $\int \dfrac{\ln x}{x}\,dx$

6. $\int \dfrac{x}{1+x^2}\,dx$

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

8. $\int \dfrac{e^x}{1+e^x}\,dx$

9. $\int \dfrac{\sec(3x)\tan(3x)}{\cos(3x)}\,dx$

10. $\int (2x+5)(x^2+5x)^7\,dx$

11. $\int (3-x)^{10}\,dx$

12. $\int \sqrt{7x+9}\,dx$

13. $\int \dfrac{x^5}{\sqrt[3]{1+x^6}}\,dx$

14. $\int e^{5x+2}\,dx$

15. $\int \dfrac{\sin(\ln x)}{x}\,dx$

16. $\int \dfrac{3+\ln x}{x\ln x}\,dx$

17. $\int \dfrac{\sin(5x)}{e^{\cos(5x)}}\,dx$

18. $\int (x+3)(x-1)^5\,dx$

19. $\int x\sqrt{4-x}\,dx$

20. $\int \dfrac{3x-5}{2x-3}\,dx$

21. $\int \dfrac{x^2+4}{x+2}\,dx$

22. $\int \dfrac{(3+\ln x)^2(2-\ln x)}{5x}\,dx$

23. $\int \sqrt{4-\sqrt{x}}\,dx$

24. $\int \tan(5x)\,dx$

25. $\int \sin^3(x)\,dx$

26. $\int \sec^2(x)\sqrt{5+\tan(x)}\,dx$

27. $\int \dfrac{\cos(x)\ln\sin(x)}{\sin(x)}\,dx$

28. $\int e^x\cos(e^x)\,dx$

29. $\int \sec^5(x)\tan(x)\,dx$

30. $\int \dfrac{x-5}{x^2-10x+9}\,dx$