

Name: _____

MA2 Integration Sheet

Evaluate each of the following integrals:

1. $\int (x^3 + 2)^{\frac{1}{2}} x^2 dx$

2. $\int \frac{8x^3}{(x^4 + 2)^3} dx$

3. $\int \frac{x^2 dx}{\sqrt[4]{x^3 + 5}}$

4. $\int 3t\sqrt{1-2t^2} dt$

5. $\int \frac{x+3}{(x^2+6x)^{\frac{1}{3}}} dx$

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

7. $\int (1-x)\sqrt{x} dx$

8. $\int \frac{x^3 + 5x^2 - 4}{x^2} dx$

9. $\int (4-x^2)^2 x^2 dx$

10. $\int \frac{7y^2}{(y^3+2)^3} dy$

11. $\int \frac{3x dx}{\sqrt{1-2x^2}}$

12. $\int (x^2 - 2x)^5 (x-1) dx$

13. $\int \frac{x+4}{(x^2+8x)^{\frac{2}{3}}} dx$

14. $\int (x^2 + 7x - 2)x dx$

15. $\int \frac{6t}{\sqrt{t^2+1}} dt$

16. $\int (x^3 - 3x)^{\frac{1}{2}} (x^2 - 1) dx$

17. $\int \sin(4x) dx$

18. $\int \sin^2 x \cos x dx$

19. $\int 2 \sec^2 x \tan x dx$

20. $\int \sin^{-3}(5x) \cos(5x) dx$

21. $\int \sec^2 \theta (\sec \theta \tan \theta) d\theta$

22. $\int \sec \theta (\sec \theta + \tan \theta) d\theta$

23. $\int \tan^3 x \sec^2 x dx$

24. $\int \frac{\sec^2 x dx}{(1 + \tan x)^2}$

25. $\int \frac{\sec^2 4x}{\tan^7 4x} dx$

26. $\int \frac{dx}{\tan^3 x \cos^2 x}$

27. $\int x^2 \sqrt{x+1} dx$

28. $\int \frac{x}{\sqrt{x-1}} dx$