

MCS 119 - Integrals involving trig and inverse trig functions

1.  $\int \sin(2x) dx$

2.  $\int e^x \tan(e^x) dx$

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

4.  $\int \sec^2(x) e^{\tan(x)} dx$

5.  $\int \frac{\cos(\ln(x))}{x} dx$

6.  $\int \frac{x^5}{\sqrt{1-x^6}} dx$

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

8.  $\int x \sec^2(x^2 + 1) dx$

$$9. \int \frac{\sin^2 x + \cos^2 x}{\sqrt{1-x^2}} dx$$

$$10. \int \frac{x^2}{\sqrt{1-x^6}} dx$$

$$11. \int \tan(x) dx$$

$$12. \int \frac{\sec^2(x)}{1 + \tan^2(x)} dx$$

$$13. \int \frac{(1 + \sqrt{x})^{\frac{1}{2}}}{\sqrt{x}} dx$$

$$14. \int \frac{(x^2 + 1)^2 - 1}{x^4} dx$$

$$15. \int \sec(x) \tan(x)(1 + \sec(x))^2 dx$$

$$16. \int \tan\left(\frac{x}{3}\right) dx$$

$$17. \int \frac{1}{1 + 4x^2} dx$$

$$18. \int \sqrt{x} \cos(2x^{\frac{3}{2}}) dx$$

$$19. \int \frac{x}{1+x^4} dx$$

$$20. \int \frac{\sqrt{\arcsin(x)}}{\sqrt{1-x^2}} dx$$

$$21. \int \frac{3}{\sqrt{1-x^2}} dx$$

$$22. \int e^x \sec^2(e^x - 7) dx$$

$$23. \int \sqrt{\tan(x)} \sec^2(x) dx$$