4.1 Trig Antiderivatives
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24) $\int (16t^4 + 24t^2 + 9)\,dt$

$$\boxed{\frac{16}{5}t^5 + 8t^3 + 9t + C}$$

25) $\int (5\cos x + 4\sin x)\,dx$

$$\boxed{5\sin x - 4\cos x + C}$$

26) $\int (t^2 - \cos t)\,dt$

$$\boxed{\frac{1}{3}t^3 - \sin t + C}$$

27) $\int (1 - \csc t \cot t)\,dt$

$$\boxed{t + \csc t + C}$$

28) $\int (\theta^2 + \sec^2 \theta)\,d\theta$

$$\boxed{\frac{1}{3}\theta^3 + \tan \theta + C}$$

29) $\int (\sec^2 \theta - \sin \theta)\,d\theta$

$$\boxed{\tan \theta + \cos \theta + C}$$

30) $\int (\sec y \tan y - \sec^2 y)\,dy$

$$\boxed{\sec y - \tan y + C}$$

31) $\int (\tan^2 y + 1)\,dy$ $1 + \tan^2 y = \sec^2 y$

$\int (\sec^2 y)\,dy$

$$\boxed{\tan y + C}$$

32) $\int (4x - \csc^2 x)\,dx$

$$\boxed{2x^2 + \cot x + C}$$