CALCULUS: Graphical, Numerical, Algebraic by Finney, Demana, Watts and Kennedy Chapter 6: Differential Equations 6.1: Solving Basic Differential Equations

6.1: Solving Basic Differential Equations What you'll Learn About Solutions to Differential Equations Find the general solution to the differential equation a.

A) $\int \frac{dy}{dx} = \left(\csc x \cot x - e^{-x} \right)$ B) $\int \frac{dy}{dx} = \left(2^x \ln 2 + \frac{1}{\sqrt{1 - x^2}} \right)$ $y = -\csc x + e^{-x} + C$ $y = 2^x + \arcsin(x) + C$ Find the general solution to the differential equation given below $C) \int \frac{dy}{dx} = \int 5x^4 \sec^2(x^5)$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $C) \int \frac{dy}{dx} = \int 0(\cos x)^4 \sin x$ $\int \frac{1}{n} = \ln x + C$ $\int \frac{1}{x^2} = \int x^{-2} dx = -x^{-1} + C = \frac{1}{x} + C$ $\int \frac{1}{\sqrt{x}} = \int x^{-1/2} = \int x^{-1/2} + C$