

7.6 Separation of Variables (General Solutions)

Calculus

Name: _____

CA #2

Find the general solution of each differential equation.

1. $\frac{dy}{dx} = -\frac{2x}{y}$

2. $\frac{dy}{dx} = y^2 \sin x$

3. $\frac{dy}{dx} = y(x + 2)$

4. $\frac{dy}{dx} = 2x^2y$

5. $\frac{dy}{dx} = \frac{x+2}{y}$

1. $y = \pm\sqrt{-2x^2 + C}$	2. $y = \frac{1}{\cos x + C}$	3. $y = Ce^{\frac{2}{3}x^2 + 2x}$	4. $y = Ce^{\frac{3}{2}x^3}$	5. $y = \pm\sqrt{x^2 + 4x + C}$
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Answers to 7.6 CA #2