



Differential Equations Assignment 4

Solve each of the Differential Equations below.

(a) $x \frac{dy}{dx} - y = x^2 \sin(x)$

(b) $\frac{dy}{dx} + 6x^5 y = x^5$

(c) $x \frac{dy}{dx} + 6y = x^3 - x$



Solutions to Assignment 4

Remember the form of your solutions may vary! Your solution might be correct even though it does not look exactly like the solution listed below.

(a) $y = Cx - x \cos(x)$

(b) $y = Ce^{-x^6} + \frac{1}{6}$

(c) $y = \frac{C}{x^6} + \frac{x^3}{9} - \frac{x}{7}$