

## Answer on Question #69639 – Math – Differential Equations

### Question

Find the solution of

$$y' = 2xy^2$$

### Solution

$$y' = 2xy^2,$$

$$dy/dx = 2xy^2,$$

$$1/y^2 \cdot dy = 2x \cdot dx,$$

$$\int 1/y^2 \cdot dy = \int 2x \cdot dx,$$

$$-1/y + C = x^2,$$

where C is constant of integration,

$$y = 1/(C-x^2).$$

**Answer:**  $y = 1/(C-x^2)$ .