Closing Today: HW_8 (8.3)
Closing Wed: HW_9A,9B,9C (9.1,9.3,9.4)
Final Exam, Saturday, June 4
1:30-4:20pm
Kane 120

Entry Task: Implicitly differentiate

$$x^2 + y^3 = 8$$

and solve for $\frac{dy}{dx}$.

9.3: Separable Differential Equations

A **separable** differential equation is one that can be written as:

$$\frac{dy}{dx} = f(x)g(y).$$

(or $\frac{dy}{dx} = \frac{f(x)}{g(y)}$ or $\frac{dy}{dx} = \frac{g(y)}{f(x)}$.)

The idea is that we will separate and integrate (Note: we are reversing *implicit differentiation*).

Example: Solve $\frac{dy}{dx} = \frac{x}{y^4}$