

$$y' = 2x \sin(x^2), \quad y(0) = 3$$

Integrate:

$$y = \int 2x \sin(x^2) dx = -\cos(x^2) + C$$

Apply initial value:

$$y(0) = -\cos(0) + C = 3$$

$$-1 + C = 3$$

$$C = 4$$

So,

$$y = -\cos(x^2) + 4$$