

Initial Value Practice Problems

1. Find $f(x)$ if $f'(x) = \cos 2x$ and $f\left(\frac{\pi}{2}\right) = 1$
2. Find y if $\frac{dy}{dx} = \sin x - \sec^2 x + \sqrt{x}$ and $y = 1$ when $x = 0$.
3. Find $f(\pi)$ if $f'(x) = x^2 + \sec x \tan x$ and $f(0) = 1$
4. Find $f(3)$ if $f'(x) = 6x^2 - 1$ and $f(2) = 3$
5. Using a calculator, find $f(2)$ if $f'(x) = \sqrt{100 - x^4}$ and $f(1) = 3$
6. Using a calculator, find $f(3)$ if $f'(x) = \cos(x^2)$ and $f(2) = 7$