2.5 Solutions

1) $\frac{dy}{dx} = \frac{-x}{y}$

3) $\frac{dy}{dx} = \frac{-y^{1/2}}{x^{1/2}}$

5) $\frac{dy}{dx} = \frac{y-3x^2}{(-x-2y)}$

7) $\frac{dy}{dx} = \frac{1-3x^2y^3}{3x^3y^2-1}$

11) $\frac{dy}{dx} = \frac{\cos x}{4\sin 2y}$

13) $\frac{dy}{dx} = \frac{\cos x - 1 - \tan y}{x^2 \sec^2 y}$

15) $\frac{dy}{dx} = \frac{y\cos xy}{(1-x\cos xy)}$

21) Slope $= -1/4$

23) $\frac{dy}{dx}$ is undefined at $(2,0)$

25) slope $= -\frac{1}{2}$

27) $\frac{dy}{dx} = m = 0$

45) $\frac{dy}{dx} = \frac{-x}{y}$

$\frac{d^2y}{dx^2} = \frac{-36}{y^3}$

47) $\frac{dy}{dx} = \frac{x}{y}$

$\frac{d^2y}{dx^2} = \frac{-16}{y^3}$

49) $\frac{dy}{dx} = \frac{3x^2}{2y}$

$\frac{d^2y}{dx^2} = \frac{3x}{4y}$

51) $m = \frac{-1}{3}$

$y = -\frac{1}{3}x + 4$