$$y' = \frac{-3x^2+y}{-x+2y}$$

$$y'' = \frac{(-x+2y)(-6x+y')-(-3x^2+y)(-1+2y')}{(-x+2y)^2}$$

$$y'' = \frac{(-x+2y)\left(-6x+\left(\frac{-3x^2+y}{-x+2y}\right)\right)-(-3x^2+y)\left(-1+2\left(\frac{-3x^2+y}{-x+2y}\right)\right)}{(-x+2y)^2}$$

$\tan^2\theta + 1 = \sec^2\theta$

$1 - \sec^2\theta = -\tan^2\theta$

$\tan(x+y) = x$

$(1+y')\sec^2(x+y) = 1$

$\sec^2(x+y) + y'\sec^2(x+y) = 1$

$-\sec^2(x+y)$ $\qquad -\sec^2(x+y)$

$$y' = \frac{1-\sec^2(x+y)}{\sec^2(x+y)} = \frac{-\tan^2(x+y)}{\tan^2(x+y)+1}$$

$$\frac{-x^2}{x^2+1} - \frac{-(\tan(x+y))^2}{(\tan(x+y))^2+1}$$

$$2yy' = 10$$

$$\frac{5x}{y}$$

$$y' = \frac{10}{2y} = \frac{5}{y} = 5y^{-1}$$

$$5xy^{-1}$$

$$y'' = -5y^{-2}y' = \frac{-5}{y^2} \cdot \frac{5}{y}$$