$$u = \frac{v}{d^2} U,$$

$$y = dY$$

$$\frac{\partial u}{\partial y} = \frac{\partial \left[\frac{v}{d^2} U\right]}{\partial [dY]} = \frac{v}{d^3} \frac{\partial U}{\partial Y}$$

Similarly for higher derivative

$$\frac{\partial^2 u}{\partial y^2} = \frac{\partial^2 \left[\frac{v}{d^2} U\right]}{\partial [dY]^2} = \frac{v}{d^4} \frac{\partial^2 U}{\partial Y^2}$$