

find $\frac{dy}{dx}$ when $x = t^2$, $y = 2t$

$$x = t^2 \qquad y = 2t$$

$$\frac{dx}{dt} = 2t \qquad \frac{dy}{dt} = 2$$

$$\frac{dy}{dx} = \frac{dy}{dt} \cdot \frac{dt}{dx} = 2 \cdot \frac{1}{2t}$$

$$\underline{\underline{\frac{dy}{dx} = \frac{1}{t}}}$$