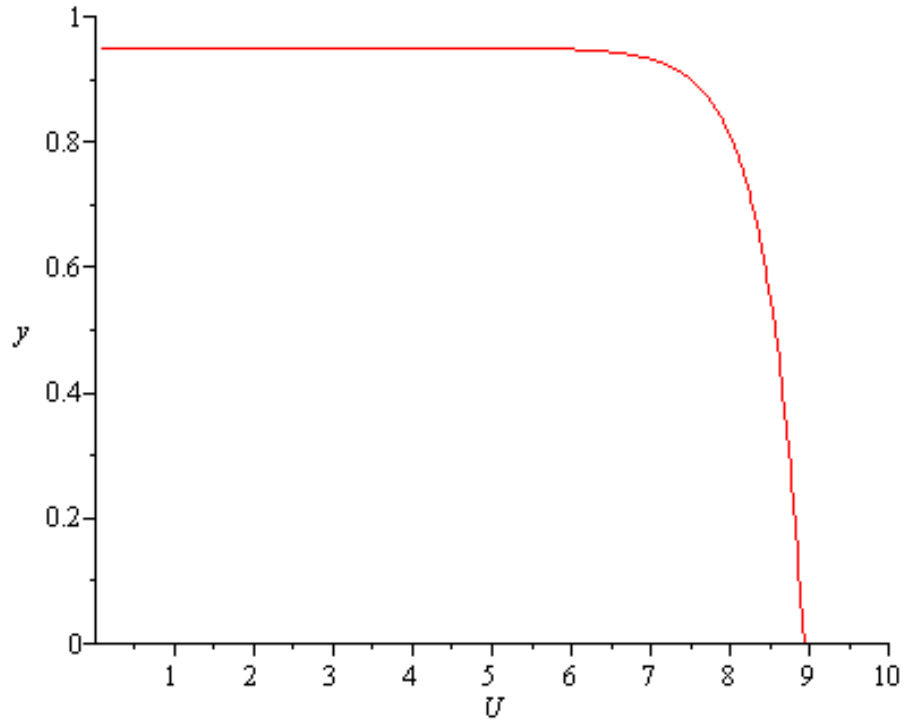


$$eql := 0.95 - 10^{-8} \cdot \left( e^{\frac{U}{1.26 \cdot 15 \cdot 0.0257}} - 1 \right)$$

$$0.9500000100 - \frac{1}{100000000} e^{2.058756923 U}$$

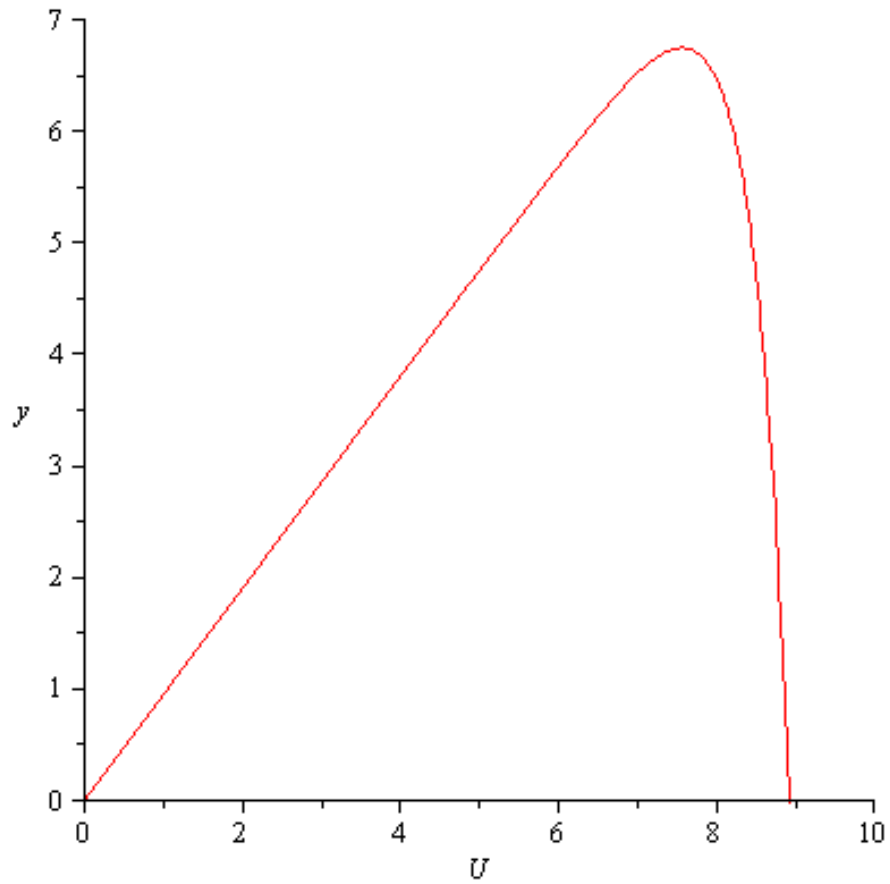
$plot([eql], U=0.1..10, y=0..1)$



$P := eql \cdot U$

$$\left( 0.9500000100 - \frac{1}{100000000} e^{2.058756923 U} \right) U$$

$plot(P, U=0..10, y=0..7)$



$eq13 := \text{diff}(P, U)$

$$-2.058756923 \cdot 10^{-8} e^{2.058756923 U} U + 0.9500000100$$

$$- \frac{1}{100000000} e^{2.058756923 U}$$

$\text{solve}(eq13 = 0)$

7.559056936

So we chose 7.55V as our max powerful point when calculate the gear ratio. The power at that moment is about 7W, the current at that moment is about 0.93A