Math 128 : Calculus 2 for the Sciences **Winter 2016**

Lecture 21: February 26, 2016

Lecturer: Jen Nelson *Notes By: Harsh Mistry*

21.1 Tangents to Polar Curves

$$\frac{dy}{dx} = \frac{\frac{dr}{d\theta}\sin\theta + r\cos\theta}{\frac{dr}{d\theta}\cos\theta - r\sin\theta}$$

Theorem 21.1 *Area of the region bounded by $r = f(\theta)$ on $\alpha \leq \theta\beta$*

$$A = \int_{\alpha}^{\beta} \frac{1}{2} r^2 d\theta$$

End of Lecture Notes
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