Sheet # 363: PREPARATION FOR NAME: _____ Period: ____

DERIVATIVES OF INVERSES & IMPLICIT DIFFERENTIATION.

1. $\sin\theta = x$ FIND $\cos\theta$ IN TERMS OF x. HINT: USE PYTHAGOREAN IDENTITY FOR $\cos\theta$, $\sin\theta$.

2. $\tan\theta = x$ FIND $\sec^2\theta$ IN TERMS OF x.

3. $\frac{d}{dx}[g(x)]^2 =$
HINT: USE CHAIN RULE. WHAT IS f?

4 and 5: Let $u = g(x)$.

4. $\frac{d}{du} u^2 =$

5. $\frac{d}{dx} u^2 =$

6. $\frac{d}{dx} y^2 =$

7. $\frac{d}{dx}(xy) =$

8. $\frac{d}{dx}\sqrt{x} =$

9. If $y = \sqrt{x}$
$\frac{d}{dx} y =$ (IN TERMS OF y)