**Implicit Differentiation Notes**

When an equation is not a function, it is often difficult or impossible to write as y=. Such relationships between x and y are called implicit relations.

Examples:

Explicit Equation: Implicit relations

(or implicit equations):

  

The method of finding  of implicit equations is “Implicit Differentiation”.

Practice of the chain rule notation:

1.  2. 



Implicit Differentiation Examples)

Find  if…

3. 

4. 

5. Find the slope of the tangent to  at .

More Examples)

6. 

7. Find  if 

8. Find  if 2. 

Implicit Differentiation Practice

Problems 1 – 8: Find .

1.  2.  3.  4. 

5.  6.  7.  8. 

9. Find the equation of the tangent to the curve at .

10. Find the equation of the tangent to the curve at .