

Horizontal and Vertical Tangent Lines with Implicit Equations

Directions: Do what it says. Don't use a calculator.

1. Find the horizontal tangent lines of each of the following equations.

a. $x^2y + x^2 = y^2 - 2y$

b. $2y - x^2y^2 = y^3$

2. Find the vertical tangent lines of each of the following equations.

a. $y^3 - y^2 = xy$

b. $x + y - x^2 + y^2 = xy$

3. Find the horizontal and vertical tangent lines of each of the following equations.

a. $x^2 - 2y + y^2 - 1 = x^3$

b. $4x + y^2 = 4x^3$