

1. [-/1 Points]

DETAILS

SCALCET9 3.XP.5.003.

PRACTICE ANOTHER

Consider the following equation.

$$4x^2 - y^2 = 8$$

(a) Find y' by implicit differentiation. $y' =$

(b) Solve the equation explicitly for y and differentiate to get y' in terms of x . $y' = \pm$

Need Help?**Read It****Watch It**

2. [-/1 Points]

DETAILS

SCALCET9 3.5.005.MI.

PRACTICE ANOTHERFind $\frac{dy}{dx}$ by implicit differentiation.

$$x^2 - 14xy + y^2 = 14$$

 $\frac{dy}{dx} =$

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3. [-/1 Points]

DETAILS

SCALCET9 3.5.015.MI.

PRACTICE ANOTHER

Find $\frac{dy}{dx}$ by implicit differentiation.

$$y \cos(x) = 2x^2 + 3y^2$$

$$\frac{dy}{dx} =$$

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4. [-/1 Points]

DETAILS

SCALCET9 3.XP.5.020.

PRACTICE ANOTHER

Find $\frac{dy}{dx}$ by implicit differentiation.

$$x \sin(y) + y \sin(x) = 4$$

$$\frac{dy}{dx} =$$

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5. [-/1 Points]

DETAILS

SCALCET9 3.XP.5.021.

PRACTICE ANOTHER

Use implicit differentiation to find an equation of the tangent line to the curve at the given point.

$$y \sin(16x) = x \cos(2y), \quad (\pi/2, \pi/4)$$

 $y =$

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6. [-/1 Points]

DETAILS

SCALCET9 3.5.039.

PRACTICE ANOTHER

Find y'' by implicit differentiation. Simplify where possible.

$$x^2 + 5y^2 = 5$$

 $y'' =$

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7. [-/1 Points]

DETAILS

SCALCET9 3.5.044.

If $x^2 + xy + y^3 = 1$, find the value of y''' at the point where $x = 1$.

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8. [-/1 Points]

DETAILS

SCALCET9 3.XP.6.039.MI.

PRACTICE ANOTHER

Find the derivative of the function.

$$y = \sin^{-1}(2x + 1)$$

 $y' =$

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9. [-/1 Points]

DETAILS

SCALCET9 3.5.064.

PRACTICE ANOTHER

Find equations of both the tangent lines to the ellipse $x^2 + 7y^2 = 63$ that pass through the point $(21, 3)$.

smaller slope

 $y =$

larger slope

 $y =$

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10. [-/1 Points]

DETAILS

SCALCET9 3.5.006.

PRACTICE ANOTHER

Find $\frac{dy}{dx}$ by implicit differentiation.

$$9x^2 + 7xy - y^2 = 9$$

 $\frac{dy}{dx} =$ **Need Help?****Read It****Watch It**