1. (2 pts) Find dy/dx in terms of x and y if $x^5y-x-7y-10=0$.

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

Answer(s) submitted:

•

(incorrect)

2. (2 pts) Find dy/dx in terms of x and y if $x\ln y+y^6=3\ln x$.

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

Answer(s) submitted:

•

(incorrect)

3. (3 pts) Find dy/dx in terms of x and y if $\arcsin(x^2y)=xy^2$.

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

Answer(s) submitted:

•

(incorrect)

4. (2 pts) Find the slope of the tangent to the curve $x^3+xy+y^2=7$ at $(1,2)$

slope = _____

(Enter **undef** *if the slope is not defined at this point.)*

Answer(s) submitted:

•

(incorrect)

5. (2 pts) Find the slope of the tangent line to the ellipse $\frac{x^2}{9}+\frac{y^2}{36}=1$ at the point (x,y).

slope = _____

Are there any points where the slope is not defined? (Enter them as comma-separated ordered-pairs, e.g., (1,3), (-2,5). Enter **none** if there are no such points.)

slope is undefined at _____

Answer(s) submitted:

•

•

(incorrect)

6. (2 pts) Find dy/dx in terms of x and y if $ax^3-by^3=c^3$. Assume that a, b and c are constants.

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

Answer(s) submitted:

•

(incorrect)

7. (2 pts) Use implicit differentiation to find the equation of the tangent line to the curve $xy^3+xy=12$ at the point $(6,1)$. The equation of this tangent line can be written in the form $y=mx+b$ where m is:____

and where b is:____

Answer(s) submitted:

•

•

(incorrect)