1. (1 pt) Find the derivative of the function $f(t)$, below. It may be to your advantage to simplify before differentiating.

$f(t) = \ln(t^9 + 7)$
$f'(t) =$ _____
Answer(s) submitted:

•

(incorrect)

2. (1 pt) Find the derivative of the function $j(x)$, below. It may be to your advantage to simplify before differentiating. Assume that k and m are constants.
$j(x) = \ln(e^{kx} + m)$
$j'(x) =$ _____
Answer(s) submitted:

•

(incorrect)

3. (1 pt) Find the derivative of the function $g(t)$, below. It may be to your advantage to simplify before differentiating.
$g(t) = \cos(\ln(t))$
$g'(t) =$ _____
Answer(s) submitted:

•

(incorrect)

4. (1 pt) Find the derivative of the function $h(w)$, below. It may be to your advantage to simplify before differentiating.
$h(w) = 2w \arctan w$
$h'(w) =$ _____
Answer(s) submitted:

•

(incorrect)

5. (1 pt) Find the derivative of the function y, below. It may be to your advantage to simplify before differentiating.
$y = 3x(\ln x + \ln 5) - 3x + e$
$\frac{dy}{dx} =$ _____
Answer(s) submitted:

•

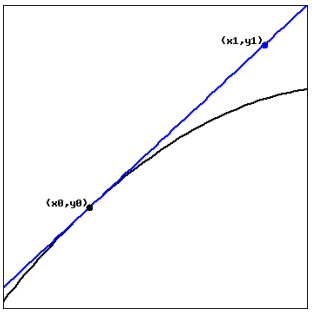
(incorrect)

6. (1 pt) For $x > 0$, find and simplify the derivative of $f(x) = \arctan x + \arctan(1/x)$.
$f'(x) =$ _____
(What does your result tell you about f)?
Answer(s) submitted:

•

(incorrect)

7. (1 pt) If $(x_0, y_0) = (3,3)$ and $(x_1, y_1) = (3.5, 3.6)$, use the following graph of the function $f(x)$ to find the indicated derivatives.



If $h(x) = (f(x))^5$, then $h'(3) =$ _____
If $g(x) = f^{-1}(x)$, then $g'(3) =$ _____
Answer(s) submitted:

•
•

(incorrect)

8. (1 pt) If $f(x) = 8\arcsin(x^4)$, find $f'(x)$.

_____

Answer(s) submitted:

•

(incorrect)

9. (1 pt) If $f(x) = 9x^3 \arctan(4x^2)$, find $f'(x)$.

_____

Answer(s) submitted:

•

(incorrect)

10. (1 pt) Let

$$f(x) = 8\sin(x)\sin^{-1}(x)$$

$f'(x) =$ _____
NOTE: The webwork system will accept $\arcsin(x)$ and not $\sin^{-1}(x)$ as the inverse of $\sin(x)$.
Answer(s) submitted:

•

(incorrect)

11. (1 pt) Let

$$f(x) = [\ln x]^4$$

$f'(x) =$ _____
$f'(e^3) =$ _____
Answer(s) submitted:

-
-

(incorrect)

12. (1 pt) If $f(x) = 4\cos(3\ln(x))$, find $f'(x)$.

_____

Find $f'(4)$.

_____

Answer(s) submitted:

-
-

(incorrect)