1. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S08-DerivLogs/3-8-27.pg**
Suppose that

$$f(x) = x^2 \ln(9 - 5x^2).$$

Find $f'(x)$, and use interval notation to give the domain of f.
Note: When entering interval notation in WeBWorK, use **I** for ∞, **-I** for $-\infty$, and **U** for the union symbol. If the set is empty, enter "" without the quotation marks.

$f'(x)$ = _____
Domain = _____
Answer(s) submitted:

-
-

(incorrect)

2. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S08-DerivLogs/3-8-18.pg**
Find $f'(x)$ if

$$f(x) = \ln \sqrt{\frac{8x+9}{7x-8}}.$$

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

-

(incorrect)

3. **(0 pts) Library/ASU-topics/setChainRuleExpLogFunctions/5-3-49.pg**
Suppose that

$$f(x) = \frac{7}{\ln(x^2+4)}.$$

Find $f'(1)$.

$f'(1)$ = _____

Answer(s) submitted:

-

(incorrect)

4. **(0 pts) Library/Rochester/setDerivatives2_5Implicit-/S03.07.LogarithmicDifferentiation.PTP01.pg**
Suppose

$$f(x) = \ln\left(\frac{ex^4}{(x-5)^5}\right).$$

(a) Find $f'(x) =$ _____. (Hint: Apply the laws of logarithms to $f(x)$ before taking its derivative.)

(b) Find $\frac{d}{dx}\left(e^{f(x)}\right) =$ _____.

Answer(s) submitted:

-
-

(incorrect)

5. **(0 pts) Library/OSU/high_school_apcalc/dchmwk4/prob13.pg**
If $f(x) = \sin(e^{3x})$, find $f'(x)$.

_____

Answer(s) submitted:

-

(incorrect)

6. **(0 pts) Library/OSU/high_school_apcalc/dchmwk4/prob10.pg**
Let

$$f(x) = -9\cos(\sin(x^8))$$

$f'(x) =$ _____

Answer(s) submitted:

-

(incorrect)

7. **(0 pts) Library/Utah/AP_Calculus_I/set7_Trigonometric_Functions-/1210s5p4.pg**
Let

$$f(x) = \sin\frac{1}{x}.$$

$f'(x) =$ _____.
Let

$$g(x) = \frac{1}{\sin x}.$$

$g'(x) =$ _____.
Answer(s) submitted:

-
-

(incorrect)

8. **(0 pts) Library/ma122DB/set6/s3_8_4.pg**
If $f(x) = 5\cos(4\ln(x))$, find $f'(x)$.

Answer: _____

Answer(s) submitted:

-

(incorrect)

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1. **(0 pts) Library/Utah/Calculus_I/set4_The_Derivative/1210s4p3.pg**
If $f(x) = 7\sin x + 4\cos x$, then
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

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2. **(0 pts) Library/Rochester/setDerivatives4Trig/s2_4_21a.pg**
Let

$$f(x) = 12\sin x + 12\cos x$$

$f'(x) =$ _____
$f'(-\frac{\pi}{6}) =$ _____
[Note: When entering trigonometric functions into Webwork, you must include parentheses around the arguement. I.e. "sinx" would not be accepted but "sin(x)" would.]
Answer(s) submitted:

-
-

(incorrect)

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3. **(0 pts) Library/Union/setDervTrigonometric/s2_4_35.pg**
Find the equation of the tangent line to the curve $y = 6x\cos x$ at the point $(\pi, -6\pi)$.
The equation of this tangent line can be written in the form $y = mx + b$ where
m = _____
b = _____
Answer(s) submitted:

-
-

(incorrect)

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4. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S02-ProdQuotRules/3-2-13a.pg**
Suppose that $f(x) = 13e^x - ex^e$. Find $f'(3)$.

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

-

(incorrect)

---

5. **(0 pts) Library/ASU-topics/setProductQuotientRule/5-2-33.pg**
Find the equation of the line tangent to the graph of $y = 6e^x$ at $x = 2$.

Tangent Line: $y =$ _____
Answer(s) submitted:

-

(incorrect)

---

6. **(0 pts) Library/Union/setDervLogs/an4_3_40.pg**
Let $f(x) = 8^{-x}$. Find $f'(x)$.
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

---

7. **(0 pts) Library/ASU-topics/setDerivativeBasicFunctions/5-2-02.pg**
Suppose that $f(x) = 10e^x + 2\ln(x)$. Find $f'(3)$.

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

-

(incorrect)

---

8. **(0 pts) Library/ASU-topics/setProductQuotientRule/5-2-35.pg**
Find the equation of the line tangent to the graph of $y = 3\ln(x)$ at $x = 4$.

Tangent Line: $y =$ _____
Answer(s) submitted:

-

(incorrect)

---

9. **(0 pts) Library/Utah/Calculus_II/set2_Transcendental_Functions-/set2_pr8.pg**
Let
$f(x) = \frac{x-1}{x+1}$.
(a) Evaluate $f^{-1}(3) =$

(b) Evaluate $(f^{-1})'(3) =$

Answer(s) submitted:

-
-

(incorrect)

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10. **(0 pts) Library/Utah/AP_Calculus_I/set7_Trigonometric_Functions-/1220s3p4.pg**

Find a formula for $f^{-1}(x)$ if :

$f(x) = (\frac{x-1}{x+1})^3$

$f^{-1}(x)$ = _____.

$\left(f^{-1}\right)'(x) =$ _____.

Hint: Undo the operations of $f(x)$ from the outside in. Undo the cubed operation first.

Answer(s) submitted:

-
-

(incorrect)

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11. **(0 pts) Library/Utah/AP_Calculus_I/set7_Trigonometric_Functions-/1220s3p3.pg**

Find a formula for $f^{-1}(x)$ if :

$f(x) = \sqrt{\frac{1}{x-2}}$

$f^{-1}(x)$ = _____.

$\left(f^{-1}\right)'(x) =$ _____.

Answer(s) submitted:

-
-

(incorrect)

1. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S02-ProdQuotRules/3-2-09.pg**
Let $f(x) = 12x^3(x^2-3)$. Evaluate $f'(x)$ at the following points:
(A) $f'(1)$ = _____

(B) $f'(-6)$ = _____

Answer(s) submitted:

-
-

(incorrect)

2. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S02-ProdQuotRules/3-2-25.pg**
Find an equation for the line tangent to the graph of

$$f(x) = 8xe^x$$

at the point $(a, f(a))$ for $a = 2$.
y = _____
Answer(s) submitted:

-

(incorrect)

3. **(0 pts) Library/Utah/Quantitative_Analysis/set5_Derivatives/pr_2.pg**
Let

$$f(x) = 5x^5 \ln x$$

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

-
-

(incorrect)

4. **(0 pts) Library/Rochester/setDerivatives7Log/mec12.pg**
Let

$$f(x) = 6^x \log_4(x)$$

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

-

(incorrect)

5. **(0 pts) Library/UVA-Stew5e/setUVA-Stew5e-C03S04-DerivsTrig/3-4-25.pg**

Find the equation of the tangent line to the curve

$$y = 3x\cos x$$

at the point $(\pi, -3\pi)$.

The equation of this tangent line can be written in the form $y = mx + b$ where
m = _____
and b = _____
Answer(s) submitted:

-
-

(incorrect)

6. **(0 pts) Library/OSU/high_school_apcalc/dchmwk4/prob7.pg**
Let

$$f(x) = -5x^8 \cos(x)$$

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

-

(incorrect)

7. **(0 pts) Library/Michigan/Chap3Sec5/Q23.pg**
Find the derivative of $f(x) = e^{-6x} \cdot \sin x$
$f'(x)$ = _____
Answer(s) submitted:

-

(incorrect)