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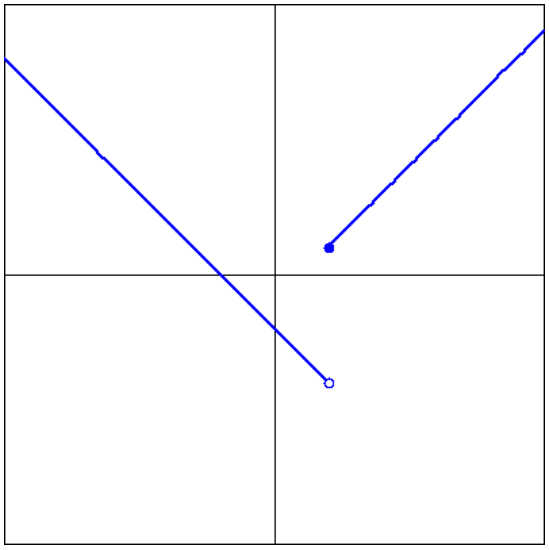
1. **(1 pt) Library/ASU-topics/setInverseFunctions/garcia1.pg**

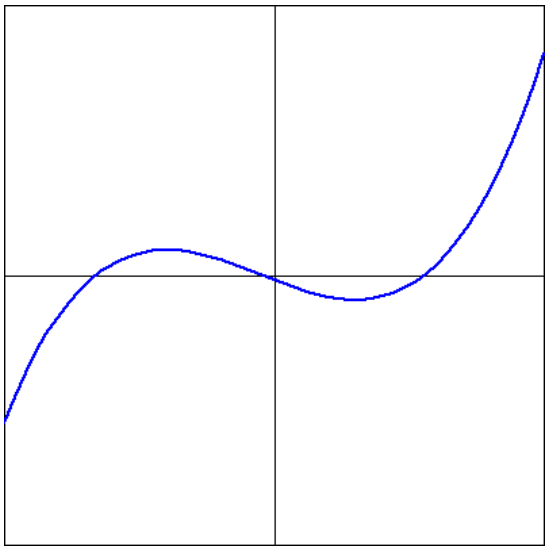
Consider the graphs below.

Determine if the function in the graph is one-to-one.



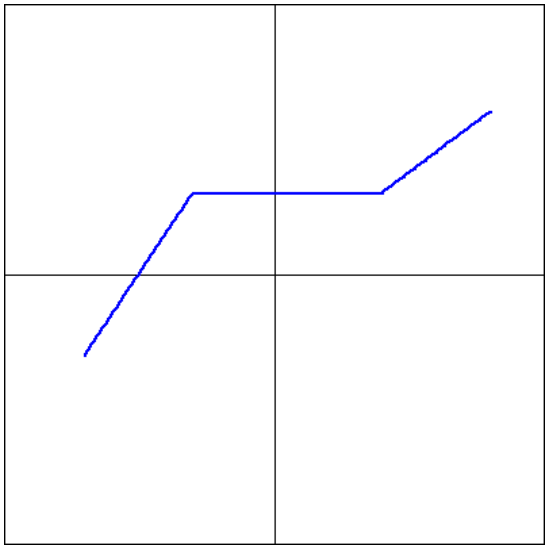
- A. The function **is** one-to-one.
- B. The function **is not** one-to-one.

Determine if the function in the graph is one-to-one.



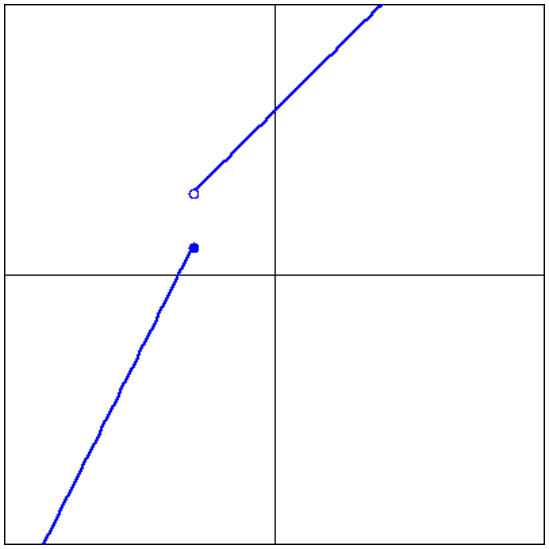
- A. The function **is** one-to-one.
- B. The function **is not** one-to-one.

Determine if the function in the graph is one-to-one.



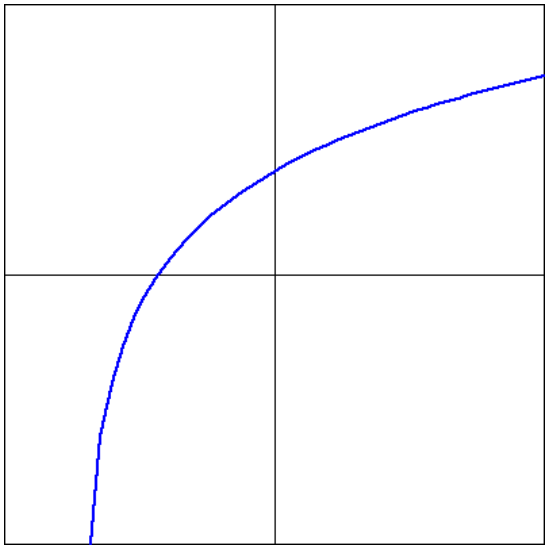
- A. The function **is** one-to-one.
- B. The function **is not** one-to-one.

Determine if the function in the graph is one-to-one.



- A. The function **is** one-to-one.
- B. The function **is not** one-to-one.

Determine if the function in the graph is one-to-one.



- A. The function **is** one-to-one.
- B. The function **is not** one-to-one.

Answer(s) submitted:

-
-
-
-
-

(incorrect)

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2. **(1 pt) Library/Rochester/setAlgebra18FunInverse/ur_inv_1.pg**

Enter T or F depending on whether the function is one-to-one or not. (You must enter T or F – True and False will not work.)

___1. $d(x) = (3x-8)^2+5$
___2. $b(x) = 8x^3 - 5x$
___3. $a(x) = 5x^4 - 5x$
___4. $e(x) = 5\sqrt{x+5}$
___5. $c(x) = \dfrac{x-5}{5+x}$

Answer(s) submitted:

-
-
-
-
-

(incorrect)

---

3. **(1 pt) UCR/SUNYSB_oneToOneOnto3_UCR_1.pg**

For each of the following functions, state whether they are onto or not. (You must enter T or F – True and False will not work.)

___1. $f : [16,\infty) \longrightarrow \mathbf{R}, f(x) = x^2$
___2. $f : [16,\infty) \longrightarrow (0, 1/256), f(x) = 1/x^2$
___3. $f : (-\infty, 0] \longrightarrow (0,1], f(x) = \frac{1}{x^2+1}$
___4. $f : \mathbf{R} \longrightarrow \mathbf{R}, f(x) = \frac{1}{x^2+1}$
___5. $f : [0,\infty) \longrightarrow [0,\infty), f(x) = x^3$

Answer(s) submitted:

-
-
-
-
-

(incorrect)

---

4. **(1 pt) Library/ASU-topics/setInverseFunctions/srw2_9_41.pg**

Find the inverse function of

$$f(x) = \sqrt{7x+6}$$

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

Answer(s) submitted:

-

(incorrect)

5. **(1 pt) Library/Rochester/setAlgebra18FunInverse/sw4_8_45.pg**
Find the inverse function of $f(x) = 1 + \sqrt[3]{x}$.
$f^{-1}(x) =$ _____

Answer(s) submitted:

-

(incorrect)

6. **(1 pt) Library/Union/setFunctionInverses/an4_1_16.pg**
Let $f(x) = \dfrac{2x+10}{2x+1}$. Find $f^{-1}(x)$.
$f^{-1}(x) =$ _____
Answer(s) submitted:

-

(incorrect)

7. **(1 pt) Library/Union/setFunctionInverses/an4_1_17.pg**
Let $f(x) = 5x^3 - 13$. Find $f^{-1}(x)$.
$f^{-1}(x) =$ _____
Answer(s) submitted:

-

(incorrect)

8. **(1 pt) Library/UCSB/Stewart5_1_6/Stewart5_1_6_29.pg**

Find a formula for the inverse of the function.

$f(x) = 1 - 2/x^3$.
$f^{-1}(x) =$ _____
Answer(s) submitted:

-

(incorrect)

9. **(1 pt) Library/ASU-topics/setInverseFunctions/pinv2.pg**
Consider the function

$$f(x) = \frac{1}{3x+2}$$

a) Find the inverse of f

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

(b) The domain of f is $x|x \neq$ _____

(c) The domain of f^{-1} is $x|x \neq$ _____

(d) The range of f is $y|y \neq$ _____

(d) The range of f^{-1} is $y|y \neq$ _____

Answer(s) submitted:

-
-
-
-
-

(incorrect)

10. **(1 pt) Library/ASU-topics/setInverseFunctions/pinv1.pg**
Consider the function

$$f(x) = \frac{x}{6x-3}.$$

a) Find the inverse of f
$f^{-1}(x)=$ _____,
(b) The domain of f is $x|x \neq$ _____

(c) The domain of f^{-1} is $x|x \neq$ _____

(d) The range of f is $y|y \neq$ _____

(d) The range of f^{-1} is $y|y \neq$ _____

Answer(s) submitted:

-
-
-
-
-

(incorrect)

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1. **(1 pt) Library/ma112DB/set10/sw6_4_17.pg**
Use the Laws of logarithms to rewrite the expression

$$\ln(x^{11}\sqrt{\frac{y^6}{z^{13}}})$$

in a form with no logarithm of a product, quotient or power.
After rewriting we have

$$\ln(x^{11}\sqrt{\frac{y^6}{z^{13}}}) = A\ln x + B\ln y + C\ln z$$

with the constant
$A =$ _____
the constant
$B =$ _____
and the constant
$C =$ _____

Answer(s) submitted:

-
-
-

(incorrect)

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2. **(1 pt) Library/ma112DB/set10/sw6_4_40.pg**
Rewrite the expression

$$\ln(a+b) + 5\ln(a-b) - 3\ln c$$

as a single logarithm $\ln A$. Then the function
A= _____

Answer(s) submitted:

-

(incorrect)

---

3. **(1 pt) Library/ma112DB/set10/sw6_4_41.pg**
Rewrite the expression

$$\ln 9 + 3\ln x + 5\ln(x^2+3)$$

as a single logarithm $\ln A$. Then the function
A= _____

Answer(s) submitted:

-

(incorrect)

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4. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_2.pg**

Differentiate $f(x) = \ln(x^2-5)$.
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

---

5. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_4.pg**

Differentiate $f(x) = \cos(\ln x)$.
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

---

6. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_8.pg**

Differentiate $f(x) = \ln \sqrt[10]{x}$.
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

---

7. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_10.pg**

Differentiate $f(t) = \dfrac{1+\ln t}{1-\ln t}$.
$f'(t) =$ _____
Answer(s) submitted:

-

(incorrect)

---

8. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_22.pg**

Find y' and y'' for $y = \dfrac{8\ln x}{x^2}$.
$y' =$ _____
$y'' =$ _____
Answer(s) submitted:

-
-

(incorrect)

---

9. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_32.pg**

Find the equation of the tangent line to the curve $y = \ln(x^3 - 7)$ at the point $(2,0)$.
$y =$ _____
Answer(s) submitted:

-

(incorrect)

---

10. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_14.pg**

Evaluate the indefinite integral

$$\int \frac{10x}{x^2+1}\,dx$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

-

(incorrect)

---

11. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_21.pg**

Evaluate the indefinite integral

$$\int \frac{10(\ln(x))^2}{x}\,dx$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

-

(incorrect)

---

12. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_31.pg**

Evaluate the indefinite integral

$$\int \frac{-3}{x\ln(x)}\,dx$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

-

(incorrect)

---

13. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_65.pg**

Evaluate the definite integral (if it exists)

$$\int_e^{e^4} \frac{-4}{x\sqrt{\ln(x)}}\,dx$$

If the integral does not exist, type "DNE".

Answer(s) submitted:

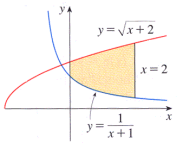
-

(incorrect)

---

14. **(1 pt) Library/UCSB/Stewart5_6_1/Stewart5_6_1_2-/Stewart5_6_1_2.pg**

Find the area of the shaded region below.



Area = _____

Answer(s) submitted:

-

(incorrect)

1. **(1 pt) Library/Union/setFunctionLogarithmic/srw4_3_51.pg**
Solve the following equation. If necessary, enter your answer as an expression involving natural logarithms or as a decimal approximation that is correct to at least four decimal places.

$$e^{4x} = 24$$

$x =$ _____
Answer(s) submitted:

•

(incorrect)

2. **(1 pt) UCR/Rochester_setAlgebra30LogExpEqns_sw6_5_48_UCR.pg**
Find the solution of the logarithmic equation:

$$\ln(x+8) + \ln(x-8) = 0$$

Your answer is:
$x =$ _____

Answer(s) submitted:

•

(incorrect)

3. **(1 pt) UCR/maCalcDB_setAlgebra30LogExpEqns_5a_UCR2.pg**
Solve for x:

$$(\ln(\ln\ x)) = 3$$

$x =$ _____

Answer(s) submitted:

•

(incorrect)

4. **(1 pt) Library/UCSB/Stewart5_3_2/Stewart5_3_2_3.pg**

Differentiate:

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

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

•

(incorrect)

5. **(1 pt) Library/UCSB/Stewart5_3_2/Stewart5_3_2_4.pg**

Differentiate:

$$g(x) = \sqrt[7]{x} e^x$$

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

•

(incorrect)

6. **(1 pt) Library/UCSB/Stewart5_3_2/Stewart5_3_2_5.pg**

Differentiate:

$$y = \frac{e^x}{x^{10}}$$

$y' =$ _____
Answer(s) submitted:

•

(incorrect)

7. **(1 pt) Library/UCSB/Stewart5_3_5/Stewart5_3_5_6.pg**

Differentiate $y = \sin(e^x)$.
$y' =$ _____
Answer(s) submitted:

•

(incorrect)

8. **(1 pt) Library/UCSB/Stewart5_3_5/Stewart5_3_5_23.pg**

Differentiate $y = e^{x\cos x}$.
$y' =$ _____
Answer(s) submitted:

•

(incorrect)

9. **(1 pt) Library/UCSB/Stewart5_3_5/Stewart5_3_5_28.pg**

Differentiate $y = \dfrac{2e^{2u}}{e^u + e^{-u}}$.
$y' =$ _____
Answer(s) submitted:

•

(incorrect)

10. **(1 pt) Library/UCSB/Stewart5_3_5/Stewart5_3_5_36.pg**

Differentiate $y = e^{-9\tan\sqrt{x}}$.
$y' =$ _____
Answer(s) submitted:

•

(incorrect)

11. **(1 pt) Library/UCSB/Stewart5_5_3/Stewart5_5_3_39.pg**

Use the Fundamental Theorem of Calculus to evaluate (if it exists)

$$\int_{-1}^{1} -2e^{u+1}\,du.$$

If the integral does not exist, type "DNE" as your answer.

Answer(s) submitted:

•

(incorrect)

12. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_6.pg**

Evaluate the following integral by making the given substitution:

$$\int -3e^{\sin(x)}\cos(x)\,dx, \quad u = \sin(x)$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

•

(incorrect)

13. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_27.pg**

Evaluate the indefinite integral

$$\int e^{x}\sqrt{10+e^{x}}\,dx$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

•

(incorrect)

14. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_57.pg**

Evaluate the definite integral (if it exists)

$$\int_{1}^{2} \frac{e^{1/x}}{-4x^{2}}\,dx$$

If the integral does not exist, type "DNE".

Answer(s) submitted:

•

(incorrect)

15. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_58.pg**

Evaluate the definite integral (if it exists)

$$\int_{0}^{1} 8xe^{-x^{2}}\,dx$$

If the integral does not exist, type "DNE".

Answer(s) submitted:

•

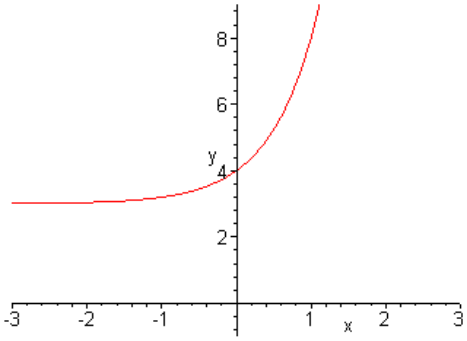
(incorrect)

1. **(1 pt) Library/Rochester/setAlgebra28ExpFunctions/c6s1p15_20-/c6s1p15_20.pg**

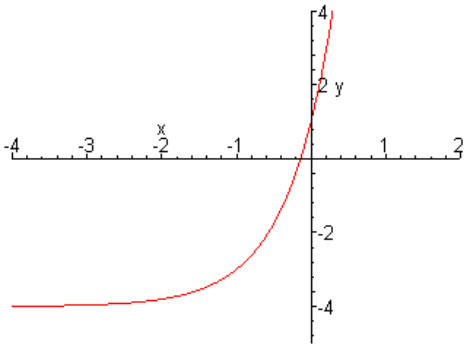
Match the functions with their graphs. Enter the letter of the graph below which corresponds to the function.

___1. $f(x) = 5^x$
___2. $f(x) = 5^{-x}$
___3. $f(x) = 5^x + 3$
___4. $f(x) = 5^{x+1} - 4$
___5. $f(x) = -5^x$

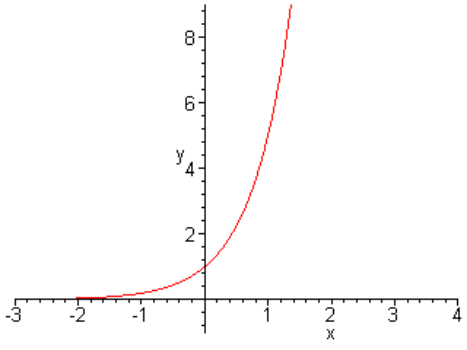
A.



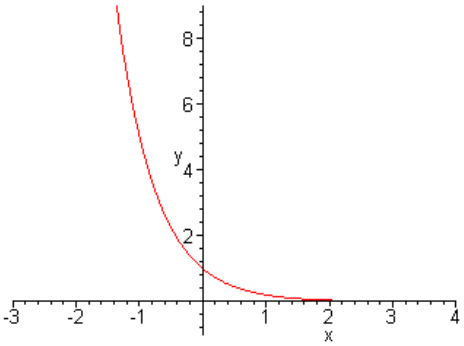
B.



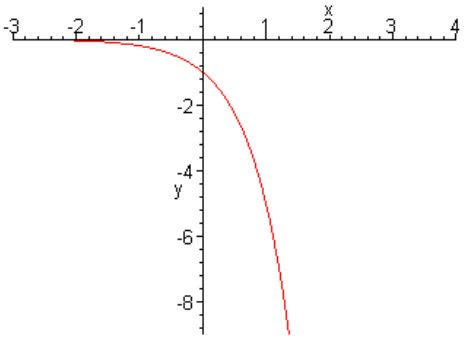
C.



D.



E.



Answer(s) submitted:

-
-
-
-
-

(incorrect)

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2. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_1.pg**

Differentiate $f(x) = \log_a x$.
$f'(x) =$ _____
Answer(s) submitted:

-

(incorrect)

---

3. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_23.pg**

Find y' and y'' for $y = \log_6 x$.
$y' =$ _____
$y'' =$ _____
Answer(s) submitted:

-
-

(incorrect)

4. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_5.pg**

Differentiate $f(x) = \log_2(4-3x)$.

$f'(x) =$ _____

Answer(s) submitted:

-

(incorrect)

5. **(1 pt) Library/270/setDerivatives7Log/mec12.pg**

Let

$$f(x) = 3^x \log_8(x)$$

$f'(x) =$ _____

Answer(s) submitted:

-

(incorrect)

6. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_40.pg**

Use logarithmic differentiation to find the derivative of the function.

$$y = x^{1/x}$$

$y' =$ _____

Answer(s) submitted:

-

(incorrect)

7. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_39.pg**

Use logarithmic differentiation to find the derivative of the function.

$$y = x^x$$

$y' =$ _____

Answer(s) submitted:

-

(incorrect)

8. **(1 pt) Library/270/setDerivatives7Log/mec7.pg**

Let

$$f(x) = x^{3x}$$

Use logarithmic differentiation to determine the derivative.

$f'(x) =$ _____

$f'(1) =$ _____

Answer(s) submitted:

-
-

(incorrect)

9. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_41.pg**

Use logarithmic differentiation to find the derivative of the function.

$$y = x^{\sin x}$$

$y' =$ _____

Answer(s) submitted:

-

(incorrect)

10. **(1 pt) Library/UCSB/Stewart5_3_8/Stewart5_3_8_42.pg**

Use logarithmic differentiation to find the derivative of the function.

$$y = (\sin x)^x$$

$y' =$ _____

Answer(s) submitted:

-

(incorrect)

11. **(1 pt) Library/Rochester/setIntegrals14Substitution-/osu_in_14_12.pg**

$\int_0^1 7^{4x}\,dx =$ _____

Answer(s) submitted:

-

(incorrect)

1. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/ur_dr_6_2.pg**
If $f(x) = 7\arctan(8x)$, find $f'(x)$.

Find $f'(4)$.

Answer(s) submitted:

•
•

(incorrect)

2. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/sc3_6_25.pg**
If $f(x) = 2\arcsin(x^2)$, find $f'(x)$.

Answer(s) submitted:

•

(incorrect)

3. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/sc3_6_26.pg**
If $f(x) = 6x^2\arctan(9x^4)$, find $f'(x)$.

Answer(s) submitted:

•

(incorrect)

4. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/sc3_6_27.pg**
If $f(x) = 5\arctan(8e^x)$, find $f'(x)$.

Answer(s) submitted:

•

(incorrect)

5. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/sc3_6_33a.pg**
Let

$$f(x) = \tan^{-1}(\sin(4x))$$

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

•

(incorrect)

6. **(1 pt) Library/Rochester/setDerivatives6InverseTrig/osu_dr_6_3.pg**
Let

$$y = \tan^{-1}\left(\sqrt{3x^2-1}\right)$$

Then $\dfrac{dy}{dx}$= _____
Answer(s) submitted:

•

(incorrect)

7. **(1 pt) Library/Union/setIntSubstitution/an6_3_15.pg**
Evaluate the indefinite integral.
$\int \dfrac{dx}{1+x^2}$ = _____ $+C$.
Answer(s) submitted:

•

(incorrect)

8. **(1 pt) Library/Union/setIntSubstitution/mec_int2.pg**
Evaluate the indefinite integral.
$\int \dfrac{(\sin^{-1}x)^4}{\sqrt{1-x^2}}\,dx$ = _____ $+C$.
Answer(s) submitted:

•

(incorrect)

9. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_22.pg**

Evaluate the indefinite integral

$$\int \frac{-5\arctan(x)}{1+x^2}\,dx$$

Note: Any arbitrary constants used must be an upper-case "C".

Answer(s) submitted:

•

(incorrect)

10. **(1 pt) Library/UCSB/Stewart5_5_5/Stewart5_5_5_66.pg**

Evaluate the definite integral (if it exists)

$$\int_0^{1/2} \frac{-7\arcsin(x)}{\sqrt{1-x^2}}\,dx$$

If the integral does not exist, type "DNE".

Answer(s) submitted:

•

(incorrect)

11. **(1 pt) UCR/270_setIntegrals14Substitution_sc5_5_39_UCR.pg**
Evaluate the definite integral.

$$\int_0^{\frac{1}{3}} \frac{3}{1+9x^2}\,dx$$

Answer(s) submitted:

-

(incorrect)

1. **(1 pt) Library/UVA-Stew5e/setUVA-Stew5e-C03S09-HyperFuncts-/3-9-35.pg**
Find the derivative of

$$f(x) = \frac{2-\cosh(x)}{2+\cosh(x)}.$$

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

•

(incorrect)

2. **(1 pt) Library/UVA-Stew5e/setUVA-Stew5e-C03S09-HyperFuncts-/3-9-38.pg**
Find the derivative of

$$f(t) = \ln(\sinh(t)).$$

$f'(t)$ = _____
Answer(s) submitted:

•

(incorrect)

3. **(1 pt) Library/UVA-Stew5e/setUVA-Stew5e-C03S09-HyperFuncts-/3-9-40.pg**
Find the derivative of

$$f(x) = \sinh(\cosh(x)).$$

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

•

(incorrect)

4. **(1 pt) Library/UVA-Stew5e/setUVA-Stew5e-C03S09-HyperFuncts-/3-9-42.pg**
Find the derivative of

$$f(x) = x^2 \sinh^{-1}(5x).$$

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

•

(incorrect)

5. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_01.pg**
Evaluate the integral.

$$\int \cosh x \sinh^6 x dx = \_\_\_\_\_ + C.$$

Answer(s) submitted:

•

(incorrect)

6. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_03.pg**
Evaluate the integral.

$$\int \frac{\operatorname{sech}^2 x}{5+\tanh x} dx = \_\_\_\_\_ + C.$$

Answer(s) submitted:

•

(incorrect)

7. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_04.pg**
Evaluate the integral.

$$\int \frac{\sinh\sqrt{7x}}{\sqrt{7x}} dx = \_\_\_\_\_ + C.$$

Answer(s) submitted:

•

(incorrect)

8. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_05.pg**
Evaluate the integral.

$$\int_5^6 \frac{1}{\sqrt{t^2-16}} dt = \_\_\_\_\_.$$

Answer(s) submitted:

•

(incorrect)

9. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_06.pg**
Evaluate the integral.

$$\int_4^9 \frac{dt}{\sqrt{9t^2+1}} = \_\_\_\_\_.$$

Answer(s) submitted:

•

(incorrect)

10. **(1 pt) Library/Rochester/setIntegrals6Hyperbolic/csuf_in_6_07.pg**
Evaluate the integral.

$$\int_{-7}^{-4} \frac{e^x}{1-e^{2x}} dx = \_\_\_\_\_.$$

Answer(s) submitted:

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(incorrect)