


Week 2 Friday Homework (1319156)

Question 1234567891011121314151617

1. Question DetailsSCalcET6 1.6.034. [667251]
Find the exact value of each expression.

(a) $\ln(1/e)$ (b) $\log_{19}(\sqrt{19})$

2. Question DetailsSCalcET6 1.6.AE.09. [1288287]

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EXAMPLE 9 Express the expression below as a single logarithm.

$$\ln(x) + \frac{1}{3} \ln(y)$$

SOLUTION Using Laws 3 and 1 of logarithms, we have

$$\begin{aligned} \ln(x) + \frac{1}{3} \ln(y) &= \ln(x) + \ln(y^{\frac{1}{3}}) \\ &= \ln(\quad) \end{aligned}$$

3. Question DetailsSCalcET6 1.6.Tut.09. [667292]

5. Question DetailsSCalcET6 1.6.037. [1289695]

Express the given quantity as a single logarithm.

$\ln(6) + 2 \ln(4)$

6. Question DetailsSCalcET6 1.6.040. [667226]

Use the change of base formula to evaluate each logarithm correctly rounded to six decimal places.

(a) $\log_{10}(6)$

(b) $\log_3(8.3)$

7. Question DetailsSCalcET6 1.6.047. [1289297]Solve each equation for x .

(a) $2 \ln(x) = 1$

$x =$

(b) $e^{-x} = 7$

$x =$

8. Question DetailsSCalcET6 1.6.048. [1288806]Solve each equation for x .

(a) $e^{5x+7} - 3 = 0$

$x =$

(b) $\ln(3 - 8x) = -2$

$x =$

9. Question DetailsSCalcET6 1.6.051. [1288111]Solve each inequality for x .

(a) $e^x < 4$

x

(b) $\ln(x) > -1$

x

10. Question DetailsSCalcET6 1.6.052. [1288352]Solve each inequality for x .

(a) $1 < \ln(x) < 9$

x

(b) $e^{2-3x} > 7$

x

11. Question DetailsSCalcET6 1.6.053. [1289549]

Consider the following function.

$$f(x) = \sqrt{4 - e^{2x}}$$

(a) Find the domain of f .
 ,
(b) Find f^{-1} .
(c) Find the domain of f^{-1} .
 ,
12. Question DetailsSCalcET6 1.6.054. [1288045]

Consider the following function.

$$f(x) = \ln(4 + \ln(x))$$

(a) Find the domain of f . (If you need to use $-\infty$ or ∞ , enter -INFINITY or INFINITY.)
 ,
(b) Find f^{-1} .
(c) Find the domain of f^{-1} . (If you need to use $-\infty$ or ∞ , enter -INFINITY or INFINITY.)
 ,
13. Question DetailsSCalcET6 1.6.059.MI. [1387406]

Find the exact value of each expression.

$$(a) \sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$$

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$$(b) \cos^{-1}\left(\frac{\sqrt{2}}{2}\right)$$

14. Question DetailsSCalcET6 1.6.062. [1338693]

Find the exact value of each expression.

$$(a) \cot^{-1}(\sqrt{3})$$

(b) $\arccos(1)$

15. Question DetailsSCalcET6 1.6.063. [1334832]

Find the exact value of each expression.

(a) $\tan(\arctan(9))$

(b) $\sin^{-1}(\sin(8\pi/3))$

16. Question DetailsSCalcET6 1.6.066. [1288585]

Simplify the expression.

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

17. Question DetailsSCalcET6 1.6.067. [1287906]

Simplify the expression.

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

Assignment Details

Name (AD): **Week 2 Friday Homework (1319156)**

Submissions Allowed: **5**

Category: **Homework**

Code:

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