



# Logarithms and Exponentials

Name: .....

Date: .....

**A**  $x = \frac{\ln 5 - 1}{2}$       **B**  $x = \frac{\ln 5 + 1}{2}$

**C**  $x = \frac{e^5 - 1}{2}$       **D**  $x = \frac{e^5 + 1}{2}$

Solve

$$e^{2x-1} = 5$$

Correct Answer: A B C D

Explanation:

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**A**  $y = \ln |x|$       **B**  $y = |\ln x|$

**C**  $x = -\ln x$       **D**  $y = |-\ln x|$

The equation of the graph on the left is given. What is the equation of the graph on the right?

$y = \ln(x)$

Correct Answer: A B C D

Explanation:

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**A**  $x$  - axis      **B**  $y = x$

**C**  $x = 0$       **D**  $y = 0$

What is the equation of the asymptote for the curve below?

$$y = e^{-x}$$

Correct Answer: A B C D

Explanation:

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Solve (getting the exact solution)

$$2e^x = 8$$

- a)  $x = e^4$       c)  $x = \frac{3\ln 2}{2}$   
b)  $x = 2\ln 2$       d)  $x = 4$

Correct Answer: A B C D

Explanation:

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$$\frac{1}{2} \log 16 + \log 2 =$$

- a.  $\log 16$   
b.  $\log 6$   
c.  $\frac{1}{2} \log 32$   
d.  $\log 8$

Correct Answer: A B C D

Explanation:

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$$\log x + \log y =$$

- A**  $\log(x + y)$   
**B**  $\log x^y$   
**C**  $y \log x$   
**D**  $\log xy$

Correct Answer: A B C D

Explanation:

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What is the integral of  $\frac{1}{x}$ ?

- a)  $-x^{-2}$       c)  $\frac{1}{x^2}$   
b)  $\ln x$       d) can't integrate  $\frac{1}{x}$

Correct Answer: A B C D

Explanation:

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Given  $y = xe^x$  then  $\frac{dy}{dx}$  is

- A**  $xe^x$
- B**  $xe^x + e^x$
- C**  $1 + e^x$
- D**  $e^x$

Correct Answer: A B C D

Explanation:

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