

Warm Up: Pre-Calc

10/10 and 10/11

1) $\log_5 \left(\frac{b}{a^5} \right)^4$ Expand

2) $4\log_3 x - 8\log_3 y$ Condense

3) $\log_3 62$ Find the value

Feb 27-7:39 AM

Solutions to P.W.:

17) 2.453

21) 2.059

25) 0.690

18) 1.153

22) 2.337

26) 4.858

19) 0

23) 2.485

20) 3.757

24) 0.374

Oct 3-9:38 AM

W.A.L.T.:

Use a property of logs to solve exponential equations.

W.A.S.I.:

We can use the power property, ability to solve equations and understanding of logs to find the solution to exponential equations.

Mar 7-9:45 AM

Notes!!! Solving Exponentials with Logs

Example:

$$3^x = 32$$

$$\frac{3x}{3} = \frac{9}{3}$$

$\log_3 3^x = \log_3 32$
 $x \log_3 3 = \log_3 32$
 $x = \log_3 32$
 $x = 3.155$

Mar 7-1:33 PM

In Class Work:

$$1) 6^x = 12 \quad x = \log_6 12 = 1.387$$

$$2) 5^x + 4 = 610 \quad x = \log_5 606 =$$

$$3) e^x = 91 \quad x = \ln 91 \quad x = \log_e 91$$

Mar 7-1:33 PM

Notes!!! Solving Exponentials with Logs

Example:

$$4^{x-2} = 35.6$$

$$\log_4 4^{x-2} = \log_4 35.6$$

$$(x-2) \log_4 4 = \log_4 35.6$$

$$x-2 = \log_4 35.6$$

$$+2$$

$$+2$$

$$x = \log_4 35.6 + 2$$

$$= 4.577$$

Mar 7-1:33 PM

In Class Work:

1) $12^{x+3} = 240$

$x = -0.794$

2) $4.2^{x+4} = 5.7$

$x = -2.787$

3) $e^{2x-4} = 148$

$x = 4.499$

Mar 7-1:33 PM

Notes!!! Solving Exponentials with Logs

Example:

$$-4 \cdot 2^{2x-3} = 100$$

$$\frac{-4}{-4} \quad \frac{100}{-4}$$
$$2^{2x-3} = -25$$

Mar 7-1:33 PM

In Class Work:

Worksheet: Solving Exponents using Logs

Mar 7-1:33 PM

Today's Activities:

- Notes

P.W. for tonight:

- Worksheet: Solving Exponents using Logs

Feb 27-7:23 AM