Topic: Solving Exponential Equations	;
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What am I learning today?

<u>Name</u>: _____ <u>Date</u>: _____

Warm-Up

Rewrite the following as a logarithm.

1.
$$10^2 = 100$$
 2. $4^5 = 1024$

2.
$$4^5 = 102^4$$

3.
$$e^2 = 7.389$$

Steps for Solving an **Exponential**

Exponential

Logarithm

1) Get the _____ by itself. 2) Rewrite the expression as a ______.

3) Evaluate with a calculator.

4) Solve.

Solve. **Examples**

1) $2^x = 7$

1)
$$2^x = 7$$

2) $4^{x+2} = 16$

3) $10^{x-4} + 6 = 12$

2) $2^{3x-1} = 32$

4) $1 - 3e^{2x} = -20$

Solve. **You Try**

1) $10^x = 1000$

3)
$$5^{3x} - 2 = 23$$

4) $6 + 2e^{x+1} = 34$

Summary Summarize the

lesson in your own words

Topic:	Solvina	Logarithmic	Fauations
<u>i Opici</u>	Solving	Logarianine	Lquations

What am I learning today?

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Warm-Up

Rewrite the following as an exponential.

1)
$$\log_{27} 3 = \frac{1}{3}$$

2)
$$\log 5027 = 3.7$$
 3) $\ln 85 = 4.44$

3)
$$ln 85 = 4.44$$

Steps for Solving a **Logarithm**

Exponential

Logarithm

1) Get the _____ by itself.

2) Rewrite the expression as a ______.

3) Evaluate with a calculator.

4) Solve.

Solve. **Examples**

1)
$$\log_4 x = 2$$

$$2)\log_5(x+2) = 1$$

3) $\log x - 3 = -4$

 $2)\log_6(3x - 1) = 2$

Solve. **You Try**

$$1) \log_2 x = 3$$

3)
$$6\log x = -6$$
 4) $\ln x - 1 = 4$

Summarize the lesson in your own words

4) $2\ln(3x) = 10$