## Algebra II

Lesson \#1 Unit 11 Class Worksheet \#1
For Worksheet \#1

This lesson will introduce and discuss logarithms.

This lesson will introduce and discuss logarithms.
Here is a definition.

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

How is this notation read?

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

How is this notation read?
the logarithm of $\mathbf{N}$ base $B$

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

How is this notation read?
the logarithm of $\mathbf{N}$ base $B$
or (more commonly)

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

How is this notation read?
the logarithm of $\mathbf{N}$ base $B$

> or (more commonly)
the $\log$ of $N$ base $B$

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

## This lesson will introduce and discuss logarithms.

Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.
a logarithmic equation

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k}
$$

This definition relates two types of equations.
a logarithmic equation and an exponential equation

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.
a logarithmic equation and an exponential equation
Understand that the 'answer' in the logarithmic equation

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.
a logarithmic equation and an exponential equation
Understand that the 'answer' in the logarithmic equation is the exponent in the exponential equation.

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.
a logarithmic equation and an exponential equation
Understand that the 'answer' in the logarithmic equation is the exponent in the exponential equation.

This lesson will introduce and discuss logarithms.
Here is a definition.

$$
\log _{B} N=k \text { if and only if } N=B^{k} .
$$

This definition relates two types of equations.
a logarithmic equation and an exponential equation
Understand that the 'answer' in the logarithmic equation is the exponent in the exponential equation.

The number $B$, in both equations, is called the base.

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$ 9
2. $\log _{9} 3=0.5$
3. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$

$$
9=
$$

3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$

$$
9=3^{2}
$$

3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$

$$
9=3^{2}
$$

3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{\mathbf{B}} N=\mathbf{k} \quad \Longrightarrow \quad \mathbf{N}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$

$$
9=3^{2}
$$

3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
2. $\log _{5} \mathbf{1 2 5}=3$

$$
9=3^{2}
$$

125
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=\mathbf{3}$
$125=5^{3}$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$
3. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \Longleftrightarrow \quad N=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$

$$
9=3^{2}
$$

3. $\log _{9} 3=0.5$
4. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
5. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

3

$$
\log _{B} N=k \quad \mathbf{k} \quad \longrightarrow \quad \mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$
4. $\log _{2} 0.25=-2$

$$
3=
$$

$$
\log _{B} N=k \quad \mathbf{k}^{k}=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$
$3=\sqrt{9}$
3
3. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
4. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{l}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$

$$
\begin{aligned}
& 3=\sqrt{9} \\
& 3=
\end{aligned}
$$

2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \longrightarrow \quad N=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$

$$
\begin{aligned}
& 3=\sqrt{9} \\
& 3=9^{0.5}
\end{aligned}
$$

2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{2} 0.25=-2$

$$
\log _{\mathbf{B}} \mathbf{N}=\mathbf{k} \quad \longrightarrow \mathbf{N}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

$$
3=90.5
$$

2. $\log _{5} \mathbf{1 2 5}=\mathbf{3}$
$125=5^{3}$
3. $\log _{2} 0.25=-2$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

$$
3=90.5
$$

2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{2} 0.25=-2$
$\mathbf{N}=\mathbf{B}^{\mathbf{k}}$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

$$
3=90.5
$$

4. $\log _{2} 0.25=-2$
0.25
$\mathbf{N}=\mathbf{B}^{\mathbf{k}}$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=$

$$
3=90.5
$$

$$
\log _{B} N=k \quad \longrightarrow \quad N=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4$

$$
3=90.5
$$

$$
\log _{\mathbf{B}} N=k \quad \mathbf{k}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

$$
3=90.5
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=$
$\mathbf{N}=\mathbf{B}^{\mathbf{k}}$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
3=90.5
$$

$$
\log _{B} N=k \quad \mathbf{l}^{\prime} \quad \mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
3=90.5
$$

0.25

$$
\log _{B} N=k \quad \square \quad N=B^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
3=90.5
$$

$0.25=$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
3=90.5
$$

$0.25=2^{-2}$

$$
\log _{B} N=k \quad \mathbf{N}^{2}=\mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$

$$
3=\sqrt{9}
$$

4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
3=9^{0.5}
$$

$$
0.25=2^{-2}
$$

$$
\log _{B} N=k \quad \mathbf{l}^{\prime} \quad \mathbf{B}^{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
3. $\log _{9} 3=0.5$
$3=\sqrt{9}$
$3=90.5$
4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
0.25=2^{-2}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the exponential equation that corresponds to each logarithmic equation.

1. $\log _{3} 9=2$
$9=3^{2}$
2. $\log _{9} 3=0.5$
$3=\sqrt{9}$
$3=9^{0.5}$
3. $\log _{5} \mathbf{1 2 5}=3$
$125=5^{3}$
4. $\log _{2} 0.25=-2$
$0.25=1 / 4=1 / 2^{2}$

$$
0.25=2^{-2}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
$\log _{3} 81$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
$\log _{3} 81=$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $\mathbf{2}^{5}=32$
$\log _{3} 81=4$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.

> 5. $3^{4}=81$
> $\log _{3} 81=4$
6. $2^{5}=32$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} \mathbf{3 2}$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} \mathbf{3 2}=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} \mathbf{3 2}=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$

$$
B^{k}=\mathbf{N} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$
$\log _{9}(1 / 3)$

$$
B^{k}=\mathbf{N} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$
$\log _{9}(1 / 3)=$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$
$\log _{9}(1 / 3)=-1 / 2$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$

> 7. $16^{1.5}=64$
> $\log _{16} 64=1.5$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{9}(1 / 3)=-1 / 2$

$$
\mathbf{B}^{k}=\mathbf{N} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.

> 5. $3^{4}=81$
> $\log _{3} 81=4$
6. $2^{5}=32$
$\log _{2} 32=5$
7. $16^{1.5}=64$
8. $9^{(-1 / 2)}=1 / 3$
$\log _{16} 64=1.5$
$\log _{9}(1 / 3)=-1 / 2$

## Algebra II Class Worksheet \#1 Unit 11

Write the logarithmic equation that corresponds to each exponential equation.
5. $3^{4}=81$
6. $2^{5}=32$
$\log _{3} 81=4$
$\log _{2} 32=5$

$$
\begin{aligned}
& \text { 7. } 16^{1.5}=64 \\
& \log _{16} 64=1.5
\end{aligned}
$$

$$
\text { 8. } 9(-1 / 2)=1 / 3
$$

$$
\log _{9}(1 / 3)=-1 / 2
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

## 9. $\log _{5} \mathbf{2 5}=$ <br> $\qquad$

10. $\log _{10} 1000=$ $\qquad$
11. $\log _{10} 0.01=$ $\qquad$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

## 9. $\log _{5} \mathbf{2 5}=$ <br> $\qquad$

10. $\log _{10} 1000=$ $\qquad$
11. $\log _{10} 0.01=$ $\qquad$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=$ $\qquad$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

10. $\log _{10} 1000=$ $\qquad$
11. $\log _{10} 0.01=$ $\qquad$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=$ $\qquad$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

10. $\log _{10} 1000=$ $\qquad$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=$

25
10. $\log _{10} 1000=$ $\qquad$
12. $\log _{10} 0.01=$ $\qquad$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=$
$25=$
10. $\log _{10} 1000=$ $\qquad$
11. $\log _{2} 0.125=$ $\qquad$ 12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=$
$25=\mathbf{5}^{2}$
11. $\log _{2} 0.125=$ $\qquad$
10. $\log _{10} 1000=$ $\qquad$
$\qquad$
12. $\log _{10} 0.01=$ $\qquad$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=\underline{2}$
$25=5^{2}$

$$
25=5^{2}
$$

11. $\log _{2} 0.125=$ $\qquad$
12. $\log _{10} 1000=$ $\qquad$


$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{gathered}
\text { 9. } \log _{5} 25=\underline{2} \\
25=5^{2}
\end{gathered}
$$

11. $\log _{2} 0.125=$

$\qquad$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=\underline{2}$
$25=5^{2}$

$$
\mathbf{2 5}=\mathbf{5}^{2}
$$

11. $\log _{2} 0.125=$ $\qquad$
12. $\log _{10} 1000=$ $\qquad$
13. $\log _{10} 0.01=$ $\qquad$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
9. $\log _{5} 25=\underline{2}$
$25=5^{2}$
10. $\log _{10} 1000=$ $\qquad$
1000

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=\underline{2} & \text { 10. } \log _{10} 1000= \\
25=5^{2} & 1000=
\end{array}
$$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{r|r}
\text { 9. } \log _{5} 25=\underline{2} & \text { 10. } \log _{10} 1000= \\
25=5^{2} & 1000=10^{3}
\end{array}
$$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=\underline{2} & \text { 10. } \log _{10} 1000=3 \\
25=5^{2} & 1000=10^{3}
\end{array}
$$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

## 11. $\log _{2} \mathbf{0 . 1 2 5}=$ <br> $\qquad$

12. $\log _{10} 0.01=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=$

$\qquad$
0.125

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

## 11. $\log _{2} 0.125=$ <br> $\qquad$

12. $\log _{10} 0.01=$
$0.125=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=$ $\qquad$ 12. $\log _{10} 0.01=$ $\qquad$
$0.125=1 / 8$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=$ $\qquad$ 12. $\log _{10} 0.01=$ $\qquad$
$0.125=1 / 8=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} \mathbf{0 . 1 2 5}=$ $\qquad$ 12. $\log _{10} 0.01=$ $\qquad$
$0.125=1 / 8=1 / 2^{3}$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{ll}
\text { 9. } \log _{5} 25=2 & \text { 10. } \log _{10} 1000=3 \\
25=5^{2} & \\
1000=10^{3} \\
\text { 11. } \log _{2} 0.125= \\
0.125=1 / 8=1 / 2^{3} & \text { 12. } \log _{10} 0.01= \\
0.125
\end{array}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{ll}
\text { 9. } \log _{5} 25=2 & \text { 10. } \log _{10} 1000=3 \\
25=5^{2} & 1000=10^{3} \\
\text { 11. } \log _{2} 0.125= \\
0.125=1 / 8=1 / 2^{3} & \text { 12. } \log _{10} 0.01= \\
0.125=
\end{array}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{ll}
\text { 9. } \log _{5} 25=2 & \text { 10. } \log _{10} 1000=3 \\
25=5^{2} & 1000=10^{3} \\
\text { 11. } \log _{2} 0.125= \\
0.125=1 / 8=1 / 2^{3} \\
0.125=2^{-3} & \text { 12. } \log _{10} 0.01= \\
&
\end{array}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

$$
\text { 11. } \log _{2} 0.125=\underline{-3}
$$

$$
0.125=1 / 8=1 / 2^{3}
$$

$$
\text { 12. } \log _{10} 0.01=
$$

$\qquad$
12. $\log _{10} 0.01=$

$$
0.125=2^{-3}
$$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$$
\log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

$$
\text { 11. } \log _{2} 0.125=-3
$$

12. $\log _{10} 0.01=$ $\qquad$

$$
\begin{gathered}
0.125=1 / 8=1 / 2^{3} \\
0.125=2^{-3}
\end{gathered}
$$

$$
N=B^{k} \quad \longrightarrow \log _{B} N=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

$$
\text { 11. } \log _{2} 0.125=-3
$$

12. $\log _{10} 0.01=$ $\qquad$

$$
0.125=1 / 8=1 / 2^{3}
$$

$$
0.125=2^{-3}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=$ $\qquad$ 0.01

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=$ $\qquad$ $0.01=$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$$
\log _{B} N=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=$
$0.01=1 / 100$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=$
$0.01=1 / 100=$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$\log _{B} N=k$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{l|l}
\text { 9. } \log _{5} 25=2 & \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3} \\
\text { 11. } \log _{2} 0.125=--3 & \text { 12. } \log _{10} 0.01= \\
0.125=1 / 8=1 / 2^{3} & 0.01=1 / 100=1 / 10^{2} \\
0.125=2^{-3} &
\end{array}
$$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$\log _{B} N=k$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{gathered}
\text { 9. } \log _{5} 25=\underline{2} \quad \text { 10. } \log _{10} 1000=3 \\
25=5^{2} \\
1000=10^{3}
\end{gathered}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=\mathbf{2}^{-3}$
12. $\log _{10} 0.01=$ $0.01=1 / 100=1 / 10^{2}$ 0.01

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{gathered}
\text { 9. } \log _{5} 25=\underline{2} \quad \text { 10. } \log _{10} 1000=3 \\
25=5^{2} \\
1000=10^{3}
\end{gathered}
$$

11. $\log _{2} 0.125=\underline{-3}$
$0.125=1 / 8=1 / 2^{3}$
$0.125=\mathbf{2}^{-3}$
12. $\log _{10} 0.01=$

$$
0.01=1 / 100=1 / 10^{2}
$$

$$
0.01=
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=\underline{-3}$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=$

$$
0.01=1 / 100=1 / 10^{2}
$$

$$
0.01=10^{-2}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=\underline{-3}$
$0.125=1 / 8=1 / 2^{3}$
$0.125=\mathbf{2}^{-3}$
12. $\log _{10} 0.01=-2$
$0.01=1 / 100=1 / 10^{2}$
$0.01=10^{-2}$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=-2$
$0.01=1 / 100=1 / 10^{2}$
$0.01=10^{-2}$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=2 \\
25=5^{2} & \text { 10. } \log _{10} 1000=3 \\
1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=\underline{-3}$
$0.125=1 / 8=1 / 2^{3}$
$0.125=2^{-3}$
12. $\log _{10} 0.01=-2$

$$
\begin{gathered}
0.01=1 / 100=1 / 10^{2} \\
0.01=10^{-2}
\end{gathered}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{array}{cc}
\text { 9. } \log _{5} 25=\underline{2} \quad 10 . \log _{10} 1000= \\
25=5^{2} & 1000=10^{3}
\end{array}
$$

11. $\log _{2} 0.125=-3$
$0.125=1 / 8=1 / 2^{3}$
$0.125=\mathbf{2}^{-3}$
12. $\log _{10} 0.01=-2$

$$
\begin{gathered}
0.01=1 / 100=1 / 10^{2} \\
0.01=10^{-2}
\end{gathered}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=
$$

14. $\log _{9} 3=$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=
$$

14. $\log _{9} 3=$ $\qquad$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=
$$

14. $\log _{9} 3=$ $\qquad$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=
$$

14. $\log _{9} 3=$ $\qquad$
15. $\log _{25} 125=$ $\qquad$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

## 13. $\log _{2} 1 / 32=$ <br> $\qquad$

 1/3214. $\log _{9} 3=$ $\qquad$
15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=$ $\qquad$ 14. $\log _{9} 3=$ $\qquad$ $1 / 32=$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=
$$

15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=$

$$
1 / 32=1 / 2^{5}
$$

$$
1 / 32
$$

15. $\log _{25} 125=$
$\qquad$
16. $\log _{9} 3=$ $\qquad$
17. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=\square .
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\begin{aligned}
& \text { 13. } \log _{2} 1 / 32= \\
& 1 / 32=1 / 2^{5} \\
& 1 / 32=2^{-5}
\end{aligned}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$
16. $\log _{9} 3=$ $\qquad$
17. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{gathered}
\log _{2} 1 / 32=-5 \\
1 / 32=1 / 2^{5} \\
1 / 32=2^{-5}
\end{gathered}
$$

15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$
$\qquad$
16. $\log _{9} 3=$ $\qquad$
17. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=-5$
$1 / 32=1 / 2^{5}$

$$
1 / 32=2^{-5}
$$

15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$ $\qquad$
16. $\log _{9} 3=$

$$
3=
$$

16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$ $\qquad$
16. $\log _{9} 3=$

$$
3=\sqrt{9}
$$

16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$ $\qquad$
16. $\log _{9} 3=$

$$
3=\sqrt{9}
$$

$$
3
$$

16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$
16. $\log _{9} 3=$

$$
3=\sqrt{9}
$$

$$
3=
$$

16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \log _{2} 1 / 32=-5 .
$$

15. $\log _{25} 125=$ $\qquad$
16. $\log _{9} 3=$

$$
\begin{aligned}
& 3=\sqrt{9} \\
& 3=9^{1 / 2}
\end{aligned}
$$

16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=-5$
$1 / 32=1 / 2^{5}$
14. $\log _{9} 3=\underline{1 / 2}$
$3=\sqrt{9}$

$$
1 / 32=2^{-5}
$$

$3=9^{1 / 2}$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{B} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=-\underline{-5}$
$1 / 32=1 / 2^{5}$
$1 / 32=2^{-5}$
14. $\log _{9} 3=\underline{1 / 2}$
$3=\sqrt{9}$
$3=9^{1 / 2}$
15. $\log _{25} 125=$
16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rl}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rr}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$ 125

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$
$125=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rr}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$ $125=5^{3}$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rl}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$ $125=5^{3}=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rr}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$

$$
125=5^{3}=\left[25^{1 / 2}\right]^{3}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rl}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$

$$
125=5^{3}=\left[25^{1 / 2}\right]^{3}
$$

125

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$ $\qquad$

$$
125=5^{3}=\left[25^{1 / 2}\right]^{3}
$$

$$
125=
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \Longleftrightarrow \log _{\mathbf{B}} \mathbf{N}=\mathbf{k}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rl}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=$ $\qquad$ 16. $\log _{3} 243=$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=\underline{3 / 2}$
16. $\log _{3} 243=$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=3 / 2$
16. $\log _{3} 243=$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

16. $\log _{3} 243=$ $\qquad$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

16. $\log _{3} 243=$

243

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{cc}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=\underline{3 / 2}$

$$
125=5^{3}=\left[25^{1 / 2}\right]^{3}
$$

$$
125=25^{3 / 2}
$$

16. $\log _{3} 243=$
$243=$

$$
\mathbf{N}=\mathbf{B}^{k} \quad \longrightarrow \log _{B} \mathbf{N}=k
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rr}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=3 / 2$

$$
125=5^{3}=\left[25^{1 / 2}\right]^{3}
$$

$$
125=25^{3 / 2}
$$

16. $\log _{3} 243=$

$$
243=3^{5}
$$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$\log _{B} \mathbf{N}=k$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=-5$
$1 / 32=1 / 2^{5}$

$$
1 / 32=2^{-5}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

14. $\log _{9} 3=\underline{1 / 2}$
$3=\sqrt{9}$
$3=9^{1 / 2}$
15. $\log _{3} 243=\underline{5}$

$$
243=3^{5}
$$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$\log _{B} N=k$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.
13. $\log _{2} 1 / 32=-5$
$1 / 32=1 / 2^{5}$

$$
1 / 32=2^{-5}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

14. $\log _{9} 3=1 / 2$
$3=\sqrt{9}$
$3=9^{1 / 2}$
15. $\log _{3} 243=\underline{5}$
$243=3^{5}$

$$
\mathbf{N}=\mathbf{B}^{\mathbf{k}}
$$

$\log _{B} N=k$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{array}{rl}
\log _{2} 1 / 32=-5 & \text { 14. } \log _{9} 3=1 / 2 \\
1 / 32=1 / 2^{5} & 3=\sqrt{9} \\
1 / 32=2^{-5} & 3=9^{1 / 2}
\end{array}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

## Algebra II Class Worksheet \#1 Unit 11

Evaluate each of the following logarithms.

$$
\text { 13. } \begin{gathered}
\log _{2} 1 / 32=-5 \\
1 / 32=1 / 2^{5} \\
1 / 32=2^{-5}
\end{gathered}
$$

15. $\log _{25} 125=3 / 2$

$$
\begin{gathered}
125=5^{3}=\left[25^{1 / 2}\right]^{3} \\
125=25^{3 / 2}
\end{gathered}
$$

14. $\log _{9} 3=1 / 2$
$3=\sqrt{9}$

$$
3=9^{1 / 2}
$$

16. $\log _{3} 243=5$
$243=3^{5}$
