

Name \_\_\_\_\_

Date \_\_\_\_\_

**Converting Between Logarithmic and Exponential Functions - Guided Lesson  
Explanation**

**Explanation#1**

Remember that the logarithm is the exponent:

$$x = b^y \text{ is } \log_b x = y$$

So logarithmic form of given exponential form is  $\log_5 25 = 2$

So, the answer is  $\log_5 25 = 2$ .

**Explanation#2**

As the logarithm is the exponent:  $\log_b x = y$  is  $x = b^y$

So exponential form of given logarithmic form is  $4^3 = 64$

So, the answer is  $4^3 = 64$ .

**Explanation#3**

Remember that the logarithm is the exponent:

$$x = b^y \text{ is } \log_b x = y$$

So logarithmic form of given exponential form is  $\log_3 9 = 2$

So, the answer is  $\log_3 9 = 2$

