

Name:	Date:
Topic:	Class:

Main Ideas/Questions	Notes/Examples						
<p>What is a LOGARITHM?</p>	<p>A logarithm (log) is another way of writing exponents.</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 5px;"> <p style="text-align: center;">Logarithmic Form</p> $\log_b a = x$ </div> <div style="margin: 0 20px;"> <p style="font-size: 2em;">➔</p> </div> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; margin: 5px;"> <p style="text-align: center;">Exponential Form</p> </div> </div> <p style="text-align: center;">↶ Read as “log base b of a equals x.”</p>						
<p>Converting LOG ↔ EXP</p>	<p>Directions: Write each equation in exponential form.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">1. $\log_3 9 = 2$</td> <td style="width: 50%; padding: 5px;">2. $\log_6 216 = 3$</td> </tr> <tr> <td style="padding: 5px;">3. $\log_7 1 = 0$</td> <td style="padding: 5px;">4. $\log_2 16 = 4$</td> </tr> <tr> <td style="padding: 5px;">5. $\log_4 \frac{1}{16} = -2$</td> <td style="padding: 5px;">6. $\log_9 27 = \frac{3}{2}$</td> </tr> </table>	1. $\log_3 9 = 2$	2. $\log_6 216 = 3$	3. $\log_7 1 = 0$	4. $\log_2 16 = 4$	5. $\log_4 \frac{1}{16} = -2$	6. $\log_9 27 = \frac{3}{2}$
	1. $\log_3 9 = 2$	2. $\log_6 216 = 3$					
	3. $\log_7 1 = 0$	4. $\log_2 16 = 4$					
5. $\log_4 \frac{1}{16} = -2$	6. $\log_9 27 = \frac{3}{2}$						
<p>Converting EXP ↔ LOG</p>	<p>Directions: Write each equation in logarithmic form.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;">7. $14^2 = 196$</td> <td style="width: 50%; padding: 5px;">8. $3^4 = 81$</td> </tr> <tr> <td style="padding: 5px;">9. $12^1 = 12$</td> <td style="padding: 5px;">10. $36^{\frac{1}{2}} = 6$</td> </tr> <tr> <td style="padding: 5px;">11. $2^{-3} = \frac{1}{8}$</td> <td style="padding: 5px;">12. $8^{\frac{4}{3}} = 16$</td> </tr> </table>	7. $14^2 = 196$	8. $3^4 = 81$	9. $12^1 = 12$	10. $36^{\frac{1}{2}} = 6$	11. $2^{-3} = \frac{1}{8}$	12. $8^{\frac{4}{3}} = 16$
	7. $14^2 = 196$	8. $3^4 = 81$					
	9. $12^1 = 12$	10. $36^{\frac{1}{2}} = 6$					
11. $2^{-3} = \frac{1}{8}$	12. $8^{\frac{4}{3}} = 16$						