

Name : \_\_\_\_\_

Score : \_\_\_\_\_

**Logarithmic & Exponential Form**

Numerals: S1

**Express each equation in logarithmic form.**

1)  $5^2 = 25$

2)  $36^{\frac{1}{2}} = 6$

3)  $3^{-3} = \frac{1}{27}$

4)  $4^3 = 64$

5)  $3^2 = 9$

6)  $2^6 = 64$

7)  $6^3 = 216$

8)  $2^{-4} = \frac{1}{16}$

**Express each equation in exponential form.**

9)  $\log_2 32 = 5$

10)  $\log_4 256 = 4$

11)  $\log_5 125 = 3$

12)  $\log_8 2 = \frac{1}{3}$

13)  $\log_3 27 = 3$

14)  $\log_4 \left(\frac{1}{64}\right) = -3$

15)  $\log_2 \left(\frac{1}{8}\right) = -3$

16)  $\log_{10} 1000 = 3$

**Logarithmic & Exponential Form**

Numerals: S1

**Express each equation in logarithmic form.**

1) $5^2 = 25$  <b><math>\log_5 25 = 2</math></b>	2) $36^{\frac{1}{2}} = 6$  <b><math>\log_{36} 6 = \frac{1}{2}</math></b>
3) $3^{-3} = \frac{1}{27}$  <b><math>\log_3 \left(\frac{1}{27}\right) = -3</math></b>	4) $4^3 = 64$  <b><math>\log_4 64 = 3</math></b>
5) $3^2 = 9$  <b><math>\log_3 9 = 2</math></b>	6) $2^6 = 64$  <b><math>\log_2 64 = 6</math></b>
7) $6^3 = 216$  <b><math>\log_6 216 = 3</math></b>	8) $2^{-4} = \frac{1}{16}$  <b><math>\log_2 \left(\frac{1}{16}\right) = -4</math></b>

**Express each equation in exponential form.**

9) $\log_2 32 = 5$  <b><math>2^5 = 32</math></b>	10) $\log_4 256 = 4$  <b><math>4^4 = 256</math></b>
11) $\log_5 125 = 3$  <b><math>5^3 = 125</math></b>	12) $\log_8 2 = \frac{1}{3}$  <b><math>8^{\frac{1}{3}} = 2</math></b>
13) $\log_3 27 = 3$  <b><math>3^3 = 27</math></b>	14) $\log_4 \left(\frac{1}{64}\right) = -3$  <b><math>4^{-3} = \frac{1}{64}</math></b>
15) $\log_2 \left(\frac{1}{8}\right) = -3$  <b><math>2^{-3} = \frac{1}{8}</math></b>	16) $\log_{10} 1000 = 3$  <b><math>10^3 = 1000</math></b>