

## Review Topic #6: Exponential and Logarithmic Functions

Date \_\_\_\_\_

**Solve each equation.**

1)  $16^{3m} = 64^{3m}$

2)  $2^{-r} = 2^4$

3)  $243^{v-2} = 81^{3v+1}$

4)  $6^{3n} = 36$

**Honors and VT only: Solve each equation. Round your answers to the nearest ten-thousandth.**

5)  $11^{m+7} = 43$

6)  $7^{5n} = 87$

**Honors and VT only: Solve each equation.**

7)  $\log_{17} (3n + 3) = \log_{17} (10 - 4n)$

8)  $\log_3 (p - 4) + 3 = 6$

9)  $-6 + \log_8 -n = -6$

10)  $1 + \log_9 10m = 2$

11)  $\log_4 x - \log_4 (x + 5) = 2$

12)  $\log_5 (x - 1) - \log_5 10 = 1$

## Answers to Review Topic #6: Exponential and Logarithmic Functions (ID: 1)

1)  $\{0\}$

2)  $\{-4\}$

3)  $\{-2\}$

4)  $\left\{\frac{2}{3}\right\}$

5)  $-5.4315$

6)  $0.459$

7)  $\{1\}$

8)  $\{31\}$

9)  $\{-1\}$

10)  $\left\{\frac{9}{10}\right\}$

11) No solution.

12)  $\{51\}$