

## Unit 5 Test 1 Review

Solve each equation. Round your answers to the nearest ten-thousandth.

1)  $17^{2n} + 7 = 44$

2)  $4^{x-7} - 1 = 78$

3)  $9^{n-8} - 8 = 49$

4)  $15^{4n} + 7 = 38$

5)  $-8 \cdot 4^{-8m} = -33$

6)  $6 \cdot 15^{-2b} = 70$

7)  $14^{-5p} + 3 = 50.8$

8)  $15^{x+1} + 5 = 62$

Solve each equation.

9)  $\log_3 2x^2 + \log_3 2 = 2$

10)  $\log_3 (x^2 - 1) - \log_3 2 = \log_3 24$

11)  $\log_3 (x - 2) - \log_3 x = \log_3 70$

12)  $\log_7 4 + \log_7 5x = 2$

13)  $\log_7 -4x + \log_7 5 = 1$

14)  $\log_2 -5x + \log_2 10 = 2$

15)  $\log_9 5x^2 + \log_9 5 = 2$

16)  $\log_3 2 + \log_3 -5x = 4$

## Unit 5 Test 1 Review

Solve each equation. Round your answers to the nearest ten-thousandth.

1)  $17^{2n} + 7 = 44$

0.6372

2)  $4^{x-7} - 1 = 78$

10.1519

3)  $9^{n-8} - 8 = 49$

9.8401

4)  $15^{4n} + 7 = 38$

0.317

5)  $-8 \cdot 4^{-8m} = -33$

-0.1278

6)  $6 \cdot 15^{-2b} = 70$

-0.4536

7)  $14^{-5p} + 3 = 50.8$

-0.2931

8)  $15^{x+1} + 5 = 62$

0.493

Solve each equation.

9)  $\log_3 2x^2 + \log_3 2 = 2 \left\{ \frac{3}{2}, -\frac{3}{2} \right\}$

10)  $\log_3 (x^2 - 1) - \log_3 2 = \log_3 24$

 $\{7, -7\}$ 

11)  $\log_3 (x - 2) - \log_3 x = \log_3 70$

No solution.

12)  $\log_7 4 + \log_7 5x = 2 \left\{ \frac{49}{20} \right\}$

13)  $\log_7 -4x + \log_7 5 = 1 \left\{ -\frac{7}{20} \right\}$

14)  $\log_2 -5x + \log_2 10 = 2 \left\{ -\frac{2}{25} \right\}$

15)  $\log_9 5x^2 + \log_9 5 = 2 \left\{ \frac{9}{5}, -\frac{9}{5} \right\}$

16)  $\log_3 2 + \log_3 -5x = 4 \left\{ -\frac{81}{10} \right\}$