Algebra II Chapter 10 Test

Name: Key

Solve each equation.

1. $3^{4x} = 3^{(3-x)}$

$\frac{3}{5}$

2. $1/32 = 2^{(1-m)}$

6

3. $9^{2p} = 27^{(p-1)}$

-3

4. $(1/9)^{m} = 81^{(m+4)}$

$-\frac{8}{3}$

5. $2^{x} * 4^{(x+5)} = 4^{(2x-1)}$

12

6. $\log_3 27 = x$

3

7. $\log_8(3x-1) = \log_8(2x^2)$

$\frac{1}{2}, 1$

8. $\log_{(x+2)}16 = 2$

2

9. $\log_3 2 + \log_3 7 = \log_3 x$

14

10. $\log_9 5 + \log_9(n+1) = \log_9 6n$

5

11. $3\log_5 x - \log_5 4 = \log_5 16$

4

12. $\log_3(5z+5) - \log_3(z^2-1) = 0$

6

13. $9^b = 45$

1.732

14. $5^p = 34$

2.191

15. $6^{(x+2)} = 17.2$

-.412

16. $x = \log_8 200$

2.548

17. $5^{(5a-2)} = 2^{(2a+1)}$

.587

18. $5^{(x-1)} = 3^x$

3.151

19. $20^{x2} = 70$

$\pm$ 1.191

20. Sketch $y = 5^x$