SM3 9.5-9.8 Test Review Answers

1. -2
2. 5
3. 3
4. $\frac{1}{2}$
5. $-\frac{1}{2}$
6. 3
7. 2
8. 20
9. -2
10. 1
11. 0
12. ≈1.5051
13. ≈−.0202
14. no solution
15. ≈172.4662
16. $10^4 = x$
17. $e^x = 5$
18. $3^5 = 243$
19. $\log_5 625 = 4$
20. $\log 100 = x$
21. $\ln x = 2$
22. $x = 1$
23. $x = 3$
24. $\log_2 5 + \log_2 x - \log_2 y$
25. $\log_8(2x - 3) - 4\log_8 x$
26. $log_3\left(\frac{6}{a}\right)$
27. $\log(x^4 y^2)$
28. $\log_4\left(\frac{9x-45}{x^7}\right)$
29. log210/log3.4≈4.3694
30. log3.8/log4≈0.9630
31. $x = 2$
32. $x = 129$
33. $x = 30$
34. $x = 8$
35. $x = \log(28) + 2$
36. x = 5/2
37. $x = \log_5(9) + 10$
38. $-\log_3(8) + 2$
39. $\ln(29) + 3$
40. $19,021.12
41. $13,448.89
42. Compounded Daily $5785.90
    Compounded Continuously $5785.98
    Compounded continuously would give the higher result.
43. 500,000 people
44. Growth, Growth rate is 8%
45. Approximately 1,112,771
46. Approximately 3.2 years