

7-4 Practice (continued)

Form G

Properties of Logarithms

Determine if each statement is *true* or *false*. Justify your answer.

40. $\log 12 = \log 4 + \log 3$

41. $\log \frac{3}{5} = \frac{\log 3}{\log 5}$

42. $\log_6 12 + \log_6 3 = 2$

43. $\frac{1}{2} \log_4 4x = \log_4 2x$

Use the properties of logarithms to evaluate each expression.

44. $\log_2 8 + \log_2 4$

45. $\log_2 160 - \log_2 5$

46. $\log_6 27 + \log_6 8$

47. $\log_7 14 - \log_7 2$

48. $\log_4 64 + 2 \log_4 2$

49. $\frac{1}{4} \log_3 162 - \log_3 \sqrt[4]{2}$