

## 7-4

## Practice (continued)

Form G

## Properties of Logarithms

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

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

Yes

41.  $\log \frac{3}{5} = \frac{\log 3}{\log 5}$  no

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

Yes

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

no

Use the properties of logarithms to evaluate each expression.

44.  $\log_2 8 + \log_2 4$

5

45.  $\log_2 160 - \log_2 5$

5

46.  $\log_6 27 + \log_6 8$

6

47.  $\log_7 14 - \log_7 2$

1

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

4

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

1