Bellwork Hon Alg 2 Thursday, April 27, 2017

1. Write each in logarithmic form.

a) $6^x = 150$ b) $x^5 = 31$

2. Write each in exponential form.

a) $\text{Log}_x 50 = 2$ b) $\text{Log}_7 x = 5$

3. Evaluate each.

a) $\text{Log}_2 8$ b) $\text{Log}_9 3$ c) $\text{Log}_{11} 11$

d) $\text{Log} 95$ e) $\text{Log}_{12} 1$ f) $\text{Log}_7(7^5)$ g) $\text{Log}_4 0.25$

4. Solve each. Round to the nearest hundredth as needed.

a) $\text{Log}_6 x = 3$ b) $\text{Log}_x 12 = 3$

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ANSWERS

1. Write each in logarithmic form.

a) $6^x = 150$ $\log_6 150 = x$ b) $x^5 = 31$ $\log_x 31 = 5$

2. Write each in exponential form.

a) $\text{Log}_x 50 = 2$ $x^2 = 50$ b) $\text{Log}_7 x = 5$ $7^5 = x$

3. Evaluate each.

a) $\text{Log}_2 8$ 3 $2^x = 8$, $x = 3$

b) $\text{Log}_9 3$ 1/2 $9^x = 3$, $\sqrt{9} = 3$, $x = 1/2$

c) $\text{Log}_{11} 11$ 1 $11^x = 11$, $x = 1$

d) $\text{Log} 95$ 1.98

e) $\text{Log}_{12} 1$ 0 $12^x = 1$, $x = 0$

f) $\text{Log}_7(7^5)$ 5 $7^x = 7^5$, $x = 5$

g) $\text{Log}_4 0.25$ -1 $4^x = .25 \rightarrow 4^x = \frac{1}{4}$, $x = -1$

4. Solve each. Round to the nearest hundredth as needed.

a) $\text{Log}_6 x = 3$ $6^3 = x$, $x = 216$

b) $\text{Log}_x 12 = 3$ $\sqrt[3]{x^3} = \sqrt[3]{12}$, $x = 2.29$