Bellwork Alg 2B Wednesday, October 25, 2017

1. Write each in logarithmic form.

a) $10^2 = x$ b) $x^3 = 729$ c) $9^x = 500$

2. Write each in exponential form.

a) $\text{LOG}_x 12 = 3$ b) $\text{LOG}_8 x = 1$ c) $\text{LOG}_5 9 = x$

3. Evaluate each. Round to the nearest hundredth as necessary.

a) $\text{LOG}_5 1$ b) $\text{LOG}_3 3$ c) $\text{LOG}_2 8$ d) $\text{LOG}_7(7^5)$

e) $\text{LOG}_{36} 6$ f) $\text{LOG}_2\left(\frac{1}{2}\right)$ g) $\text{LOG}1000$ h) $\text{LOG}54$

Answers

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1. Write each in logarithmic form.

a) $10^2 = x$ $\quad$ b) $x^3 = 729$ $\quad$ c) $9^x = 500$

$\log X = 2$ $\quad$ $\log_x 729 = 3$ $\quad$ $\log_9 500 = X$

2. Write each in exponential form.

a) $\text{LOG}_x 12 = 3$ $\quad$ b) $\text{LOG}_8 x = 1$ $\quad$ c) $\text{LOG}_5 9 = x$

$x^3 = 12$ $\quad$ $8^1 = X$ $\quad$ $5^X = 9$

3. Evaluate each. Round to the nearest hundredth as necessary.

a) $\text{LOG}_5 1 = 0$ $\quad$ b) $\text{LOG}_3 3 = 1$ $\quad$ c) $\text{LOG}_2 8 = 3$ $\quad$ d) $\text{LOG}_7(7^5) = 5$

$5^? = 1$ $\quad$ $3^? = 3$ $\quad$ $2^? = 8$ $\quad$ $7^? = 7^5$

e) $\text{LOG}_{36} 6 = 1/2$ $\quad$ f) $\text{LOG}_2\left(\frac{1}{2}\right) = -1$ $\quad$ g) $\text{LOG}1000 = 3$ $\quad$ h) $\text{LOG}54 = 1.73$

$36^? = 6$ $\quad$ $2^? = \frac{1}{2}$ $\quad$ $10^? = 1000$ $\quad$ DO THIS USING A CALCULATOR!

$\sqrt{36} = 6$

$36^{1/2} = 6$