

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) $\text{Log}_x 169 = 2$

b) $\text{Log}_8 x = 1$

c) $\text{Log}_4 3 = x$

3. The number of invasive species of fish in a lake is increasing 12.7% each year. The last time a count was made showed that there were 680 of that species in the lake. Find the number of years, to the nearest hundredth, it will take for there first to be 10,000 of these fish in the lake.

ANSWERS

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$100 + 12.7 = 112.7$ $b = 1.127$

$y = 680(1.127)^x$
 $10,000 = 680(1.127)^x$

$x = 22.48 \text{ yrs}$