Logs and Exponentials LEe

Evaluate the following logarithms:

1. log 3.4
2. log 5
3. ln 1.5
4. ln 8

5. $\log_2 3.4$
6. $\log_3 5$
7. $\log_6 1.5$
8. $\log_8 8$

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Convert the logarithmic equation to an exponential equation

9. $2 = log_5 k$
10. $3 = \log x$
11. $q = \ln t$

Solve for x:

12. $x - 3 = log_2 45$
11. $7.2 = 10^x$
13. $3.2 = e^x$

14. $21 = 5^x$
15. $100 = 4 \cdot 3^x$
16. $9 = 2^x + 5$

17. A bacteria culture has 10 spores. The bacteria doubles every 4 hours.

a) How many bacteria will there be in 1 day?

b) How long until there are 100 spores?