

Math 32 Quick Quiz

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Decide whether each of the following equations is true or false. You may assume that all variables are positive real numbers. Try to answer these questions as quickly as you can.

Do not show work unless you need to.

1. $\log_C(A + B) = \log_C A + \log_C B$

9. $e^{\ln(AB)} = AB$

2. $\log_C(A)/\log_C(B) = \log_C(A - B)$

10. $e^{(\ln A)^B} = AB$

3. $\frac{1}{A} + \frac{1}{B} = \frac{A + B}{AB}$

11. $\ln(A^B) = \ln BA$

4. $\log_C\left(\frac{A}{B}\right) = \log_C(A) - \log_C(B)$

12. $(\ln A)^B = B \ln A$

5. $\ln e^t = t$

13. $\sin \pi = 1$

6. $\ln e^{AB} = AB$

14. $\sin(-3\pi/2) = 1$

7. $\ln(e^A)^B = AB$

15. $\sin^2 \theta = 1 - \cos^2 \theta$

8. $e^{\ln t} = t$

16. $\sin(\pi - x) = \cos(-x)$