

No calculators are allowed on this quiz. Please read each question carefully, follow directions and clearly mark your solutions. **Show your work for full credit.**

1. Is the following statement true or false? If it is false, **rewrite** it to make it true.

(a) $\log_b x = \frac{\log_x a}{\log_b a}$

(b) $\ln(x + y) = \ln(x) \cdot \ln(y)$

(c) $2 = \log_b x$ is equivalent to $b^2 = x$

2. Solve

$$\log_2(x + 50) = 4$$