

**Quiz 3**  
(20 points total)

1. Write each number in scientific notation and then multiply. Write your final answer in scientific notation.
2. Solve for  $x$ .
  - a.  $5 * 10^{x+1} = 5000$
  - b.  $2\log(2x + 50) = 4$
3. Write in simplest terms. Your answer should not contain negative exponents or radicals.

a.  $\left(\frac{-2x^3y^4}{x^2y}\right)^2$

b.  $\frac{a^{-3}bc^{-4}}{(ab^{-3})^{-2}c}$

c.  $\sqrt{\frac{9x^2y^4}{16x^3y^3}}$