

## Quiz 6

1. Expand.

$$\log \left( \frac{x \sqrt[3]{x+2}}{(y-1)^3} \right)$$

2. Solve for  $x$ .

$$\log(x^5) - \log(x^3) + 2\log(x) = 8$$

3. The decay of 50 mg of a chemical is modeled by  $f(t) = 50 \cdot .9^t$ , where  $t$  is measured in years.
- How much time is required for the sample to decay to 5 mg?

- What is the half-life of this chemical?