

Worksheet #5 - Solving Exponential Functions

January 26, 2005

Please print your name(s) at the top of the page. Please answer in complete sentence.

$$y = 40 \cdot 3^x$$

$$y = 60 \cdot 2^x$$

- Graph each of the exponential functions.
- Determine where the two intersect.
- Using algebra and the log function, solve for the intersection.

$$y = 40 \cdot \left(\frac{3}{2}\right)^x$$

$$y = 60 \cdot \left(\frac{2}{3}\right)^x$$

- Graph each of the exponential functions.
- What are the values at $x = 1$ for each of the functions?
- Determine where the two intersect.
- Using algebra and the log function, solve for the intersection.

$$y = 100e^{-5x}$$

$$y = 30e^{-2x}$$

- Determine when each of the functions is half the value of its initial amount ?