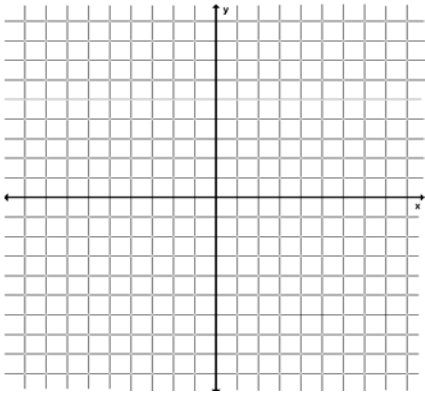


Review Lessons 7.1 – 7.3 Worksheet

Name: _____

Graph the function. Then state the domain and range.

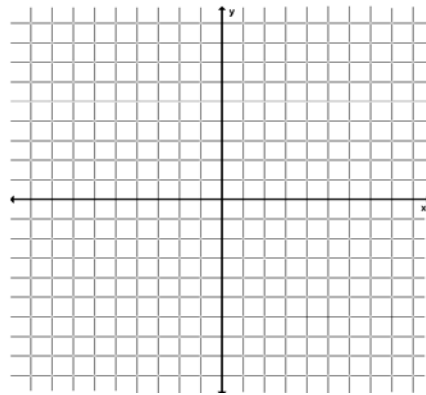
1.) $y = 0.6e^{x-2}$



domain: _____

range: _____

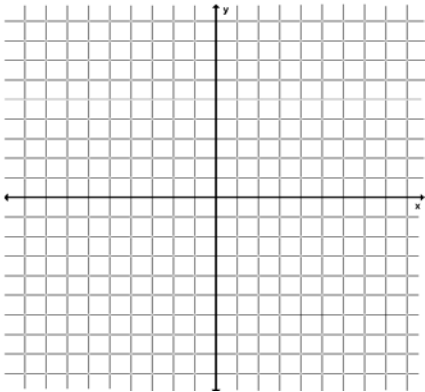
2.) $h(x) = 4\left(\frac{1}{2}\right)^{x+1}$



domain: _____

range: _____

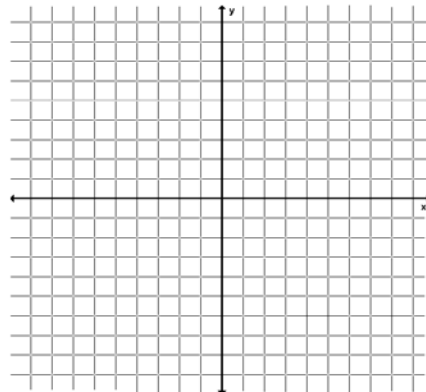
3.) $f(x) = e^{-2(x+1)} - 3$



domain: _____

range: _____

4.) $y = 4 \cdot 2^{x-1} - 3$



domain: _____

range: _____

Simplify the expression.

5.) $3e^4 \cdot e^3$

6.) $\frac{8e^{5x}}{6e^{2x}}$

7.) $(-5e^{3x})^{-3}$

8.) $\sqrt[3]{48e^4}$

- 9.) You deposit \$3300 in a bank account. Find the balance after 5 years for each of the situations described below.
- The account pays 5% annual interest compounded semiannually.
 - The account pays 4.9% annual interest compounded monthly.
 - The account pays 4.8% annual interest compounded daily.
 - The account pays 4.7% annual interest compounded continuously.
- 10.) The population of a city decreased from 1995 to 2007 by 1.5% annually. In 1995 there were about 357,000 people living in the city.
- Write a model that represents the city's population y as a function of t years since 1995.
 - Find the approximate population of the city in 2003?
- 11.) The owner of an original copy of a 1938 comic book sold it at an auction in 2005. The owner bought the comic book for \$55 in 1980. The value of the comic book increased at a rate of 2.8% per year.
- Write a function that models the value y of the comic book over time t .
 - What was the approximate value of the comic book at the time of the auction in 2005?
 - In approximately what year will the comic book be worth \$150?