Practice 3-2 B Name: _____

Date: _____

Evaluate each expression to four decimal places.

1. e^2 2. $e^{-2.5}$ 3. $e^{\frac{1}{3}}$ 4. $e^{\sqrt{2}}$

5. The formula $A = 6000e^{rt}$ can be used to find the dollar value of an investment of \$6000 after t years when the interest is compounded continuously at a rate of r percent.
   a. Find the value of the investment after 6 years if the interest rate is 7%.
   b. Find the value of the investment after 8 years if the interest rate is 8%.

6. The formula $A = 4000e^{rt}$ can be used to find the dollar value of an investment of \$4000 after t years when the interest is compounded continuously at a rate of r percent.
   a. Find the value of the investment after 8 years if the interest rate is 5%.
   b. Find the value of the investment after 9 years if the interest rate is 8%.

7. Marion decides to invest \$5000 at 5% interest compounded continuously. Find the value of the investment after two years.

8. True or False: The formula for interest compounded continuously is $A = pe^{rt}$.

Describe how the graph of each function relates to its parent function. Then graph

Parent function: $y = 5^x$

(9) $y = 5^x - 1$ (10) $y = 5^{x+2}$ (11) $y = 5^{x-1} + 3$

Write the new function for the parent function $y = ab^x$ that was shifted 3 units right and 2 units up.