Make a table of values and graph the following without using a calculator.

1. $f(x) = 3^x$

2. $f(x) = 4^{-x}$

3. $f(x) = 4(3^x)$

4. $f(x) = \left(\frac{1}{4}\right)^x$

Find a value of $b > 1$ to express the following exponential functions in the form $y = b^{-x}$.

5. $y = \left(\frac{1}{4}\right)^x$

6. $y = \left(\frac{3}{5}\right)^x$

7. If \$2000 is invested for x years at 4% compounded quarterly, the future value is $S = 2000(1.01)^{4x}$
What will the amount be in 6 years?

8. The size of a bacteria population after t hours is given by $y = 100(1.5^t)$

1. How many bacteria are there initially (i.e. when $t = 0$)? **(b).** How many bacteria are there after 1 day?

1. Check graph w/calculator

2. Check graph w/calculator

3. Check graph w/calculator

4. Check graph w/calculator

5. $y = 4^{-x}$

6. $y = \left(\frac{5}{3}\right)^{-x}$

7. \$2539.47

8. **(a).** 100 **(b).** $1,683,411$

Homework: Section 5.1, p. 336: #1, 3(a), 5, 7, 9, 11, 17, 19, 21, 29, 30, 34