

**PROBLEM SET 8-2**  
(Properties of Exponential Functions)

**Graph each function. Label the asymptote of each graph.**

1.  $y = -5^x$

2.  $y = -3(2)^x$

3.  $y = -\left(\frac{1}{3}\right)^x$

4.  $y = -24\left(\frac{1}{2}\right)^x$

5.  $y = -2(5)^{x+3}$

6.  $y = 9\left(\frac{1}{3}\right)^{x+7} - 3$

**Find the amount in a continuously compounded account for the given conditions.**

|     | Principal   | Annual Interest Rate | Time      |
|-----|---|----------------------|-----------|
| 7.  | \$2000  | 5.1%                 | 3 years   |
| 8.  | \$400   | 7.6%                 | 1.5 years |
| 9.  | \$950   | 6.5%                 | 10 years  |
| 10. | A student wants to save \$8000 for college in five years. How much should be put into an account that earns 5.2% annual interest compounded continuously. |                      |           |