

## LESSON 97 .....

1. Check your graph using your graphing calculator.  
The graph shows exponential growth.
2. Check your graph using your graphing calculator.  
The graph shows exponential decay.
3. Exponential decay ( $b = 0.5 < 1$ )
4. Exponential growth ( $b = 3 > 1$ )
5. a. The initial bear population is 500.  
b. Each year the bear population increases by a factor of 1.05.  
c. The bear population increases by 5% per year.  
d. This is exponential growth because  $1.05 > 1$ .
6. a. The sales right after the publication was \$3,000.  
b. The sales decreases by a factor of 0.8 every 6 months.  
c. The sales decreases by 20% every six months.  
d. This is exponential decay because  $0.8 < 1$ .
7. Growth ( $b = 2 > 1$ )
8. Neither
9. Decay ( $b = 0.9 < 1$ )
10. Growth ( $b = 4 > 1$ )
11. Decay ( $b = 0.9 < 1$ )  
\$26,000
12. Growth ( $b = 1.04 > 1$ )  
1.04
13. Decay ( $b = 0.93 < 1$ )  
7% (decrease)
14. Growth ( $b = 1.2 > 1$ )  
20% (increase)
15. Growth ( $b = 2 > 1$ )  
Every 4 hours