**In #1 – 6, write the equations given the initial value and percentage rate.**

1. a = 120, 13% decrease

2. a = 35, 8% increase

3. a = 219, 4% decrease

4. a = 11, 15.25% increase

5. a = 97, 7.65% decrease

6. a = 432, 3.2% increase

**In #7 – 12, solve for the unknown. In the problems where you are solving for the multiplier, state the percentage rate and whether it is an increase or decrease.**

7. a = 165, x = 3, y =185.6

8. 8% increase, x = 4, y = 142.85

9. a = 85, x = 5, y = 21.552

10. 38% decrease, x = 2, y = 16.145

11. a = 1,000, x = 4, y = 1,286.5

12. 12% decrease, x = 3, y = 511.1

**In #13 – 15, write the equation of the exponential function that goes through the two given points.**

13. (3, 661.52) and (6, 810.39)

14. (1,576.94) and (5, 395.64)

15. (4, 189.16) and (9, 364.22)