1. Determine the inverse of the following functions. Verify your answer through composition.
2.  b. 
3. Given:   

Find: a.  b.  c. 

 Multiply or Divide. Assume that all expressions are defined.

3.  4. 

5. 

Simplify . Assume that all expressions are defined.

6.  7. 

Add or subtract. Assume all expressions are defined.

8.  9. 

10. 

Solve each equation. Be sure to check your solutions!

11. .  12. 13. 

Simplify each expression. Assume all variables are positive.

14. \_\_\_\_\_\_\_\_ 15.  \_\_\_\_\_\_\_\_\_

16. Write in radical form and simplify.  \_\_\_\_\_\_\_\_ Radical form: \_\_\_\_\_\_\_\_ Simplified:\_\_\_\_\_\_\_\_

17. Write using rational exponents. Then simplify.  \_\_\_\_\_\_\_\_ Rational exponents: \_\_\_\_\_\_\_ Simplified:

18. Simplify: a.  \_\_\_\_\_\_\_\_ b.  \_\_\_\_\_\_\_\_

19. Identify each of the following as being exponential growth, exponential decay, or neither.

\_\_\_\_\_\_\_\_\_\_\_\_\_ a. \_\_\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_\_\_\_\_ c. 

 20-22 Determine whether each sequence is arithmetic, geometric, or neither. If it is arithmetic or geometric, determine the equation for the nth term of each sequence and find a10.

1. 1, 3, 6, 10, 15, …
2. 40, 43, 46, 49, 52, …
3. 4, $\frac{13}{3}$, $\frac{14}{3}$, 5, $\frac{16}{3}$, …

23-24: Write a recursive formula for each sequence, then find the next three terms.

1. 2, -6, 18, -54, 162, …
2. 15, 215, 415, 615, 815,

25-26: Find the sum of each geometric series.

1. $\sum\_{n=1}^{8}2∙\left(-2\right)^{n-2}$ 26. $\sum\_{n=1}^{10}4∙\left(-3\right)^{n-1}$