Honors Algebra 2 Trigonometry Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Unit 7 Review – Exponential & Logarithm Functions

1. Rewrite the expression as an exponential expression.

A.  B. 

2. Rewrite the expression as a logarithmic expression.

A.  B. 

3. Expand

 A.  B. 

4. Condense

A.  B.  C. 

5. Simplify without a calculator.

A.  B.  C.  D. 

E.  F.  G.  H. 

I.  J. 

K.  L. 

6. Verify the equation. 

7. Given:  Prove: 

8. Given that log 4 = 0.6021, log 9 = 0.9542, and log 12 = 1.0792, evaluate the following:

A.  B.  C. 

D.  E. log 3.6 F. log 4800

9. Solve each equation.

A.  B.  C.  D. 

E.  F.  G.  H. 

I.  J.  K.  L. 

M.  N.  O. 

P.  Q.  R. 

 S. If , then what is ? T. 

11. Graph each function. Then state the domain and range of each.

![[image]]()![[image]]()![[image]]()A.  B.  C. 

D.  E.  F. 

![[image]]()![[image]]()![[image]]()

![[image]]()G.  H. Find the domain and range of 

14. $15,000 is invested into the given accounts. Find the amount of money after 10 years. Which is best?

 A. 5.25% interest, compounded yearly

B. 5% interest, compounded daily

C. 4.75% interest, compounded continuously

D. How long will it take for the $15,000 to become $100,000 if it is invested at 6%, compounded monthly?

15. You borrow $2,300 to help buy a car. The interest on the loan was compounded annually for 5 years, and the interest rate remained constant throughout that time. At the end of the five years, you owed $3,301.95 (including the original $2,300.) To the nearest tenth of a percent, what was the interest rate?

16. You want to have $1,000,000 in your account when you retire from your future job 50 years from now. You find a bank that will let you invest at 10%, compounded quarterly if you put it all in right now and do not add to it or take any money out for 50 years. How much money do you need to invest right now?

18. Evaluate the function at the indicated value of x. Round your answer to the nearest thousandth.

A.  B. 

19. Evaluate the logarithm using the change of base formula. Round your answer to the nearest thousandth.

 A.  B. 

20. Write the equation of the graphed function in the form .

![[image]]()