**Exponential & Logarithmic function Review**

1, At the start of 2005, Tristan’s father invested $500 his grandmother gave him for his birthday in an investment that doubles every seven years. In what year will he have $1,200 in his account?

2, Express as a single logarithm.

3, Given , the value of x is

4, Explain the steps to solve the equation

5, Michelle is trying to determine the value of x in the equation . Which one of the following will she use to obtain the value of x.

6, The price of a particular product doubles every 35 years. If the price of the product was $16.40. On January 1, 1996, the price of the product will be $36.50 in the year ???

7, Solve the following equation for x:

8, Evaluate

9, Solve:

10, Compare to the graph of , describe the transformation of the function

11, Use the laws of logarithms to write each of the following as a single logarithm.

a) b) c)

d) e) f)

g) h) i)

k) l)

12, Solve the following logarithmic equation for the variable x

a) b) c)

d) e) f)

13, Use logarithms to determine the solutions to the following exponential equation, rounded to 1decimal place.

a) b) c)

14,A radioactive element has a half-life of 120 years. Determine the length of time needed for an initial mass of 50g to decay to a final mass of 42g.

15, Write the following in exponential form

a) b) c)

16, Sketch the graph of each function

a)

b)

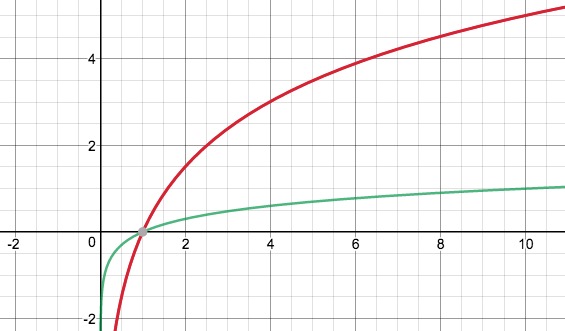
17, Identify the following characteristics of the graph of the function

1. Domain & Range
2. X intercepts
3. Y intercepts
4. HA/VA??

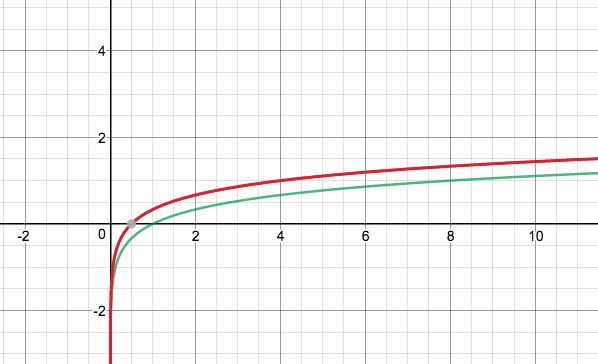
18. Match the following functions with the given graphs



\_\_\_\_\_1,



\_\_\_\_\_2,



\_\_\_\_\_3,

