**![MC900439415[1]]()Algebra 1:**

**Unit #5: Functions Reflective Portfolio**

At the conclusion of each unit, you will complete a reflective study sheet.

**Section #1: Vocabulary: Write a definition for each**

1. Domain vs Range:
2. Function:

**Section #2: Formulas/Equations/Rules (Show the process)**

1. The name of seven parent functions:
2. The formula for finding the average rate of change.

**Section #3: Key methods and concepts**

1. Identify if the relation represents a function and justify your answer. 



1. Given the following three functions: x f(x)

t(x)h(x)

1. Evaluate t(3)= \_\_\_\_\_\_\_\_ h(4)= \_\_\_\_\_\_\_\_ f(-1)= \_\_\_\_\_\_\_\_\_\_ -2f(-1)+3t(3)=
2. Find x when $t\left(x\right)=-1$ \_\_\_\_\_\_\_\_\_\_\_\_ Find x when $h(x)=10$ \_\_\_\_\_\_\_\_\_\_\_
3. Find the Average rate of change over the interval 2≤x≤4 for t(x) and h(x)
4. Look at the graph and find the following



1. Domain:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Range:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Intercepts. Zeros:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 y-intercept\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Intervals An increasing interval\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 A decreasing interval\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 An interval where f(x) > 0\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 An interval where f(x)< 0\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Extrema: Maximum:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Minimum:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2.  Graph the following step function:

$$h\left(t\right)=\left\{\begin{array}{c}3 0\leq t\leq 2 \\6 2<t\leq 5\\ 8 5<t\leq 12\end{array}\right.$$

1. Graph and evaluate the following Piecewise function

$f\left(x\right)=\left\{\begin{array}{c}x+3 x<-2 \\x^{2} -2\leq x<1\\-x+2 x\geq 1\end{array}\right.$

1. Evaluate based on the above h(t) and f(x)

f(-2)= f(1)=

h(1)= h(5)=