Write an algorithm for the following problems: (You do not need to write a program for these problems yet). The algorithm can just be hand written, but make sure it is readable and if multiple pages make sure to staple them together. Make sure to do the three step analysis for each one before you write the algorithm. **For full credit you need to turn this in as well.**

1) We want to know how many cubic feet, or the volume, are in a rectangular solid of a given Height, Width, and Length. (Hint, the Height, Width and Length are inputs to problem, and the cubic foot is the output, and number of cubic feet is equal to Length times Width times Height)

2) User enters an integer and problem tells user if the number is between 1 and 100, and if it is then display “Good Input”, else displays “Bad Input”.

3) A problem that will convert a total number of days into the corresponding number of years and days left over. For example, if you enter 1254 days, then it would display “3 years and 159 days”. (Hint, there are 365 days in one year, and use the / (div) and % (mod) operators)

4) A problem that determines if an entered number is negative or positive, and continues to have user enter numbers and display appropriate response until user enters a zero. Will keep looping until the user enters 0.

5) A problem that has user continue to enter weight of people and keeps a running total weight of all the people and also keeps track of the number of people entered. This will continue until a weight entered is less than or equal to zero. Problem will then display the average weight of all the people.

6) A child’s parents promise to give the child $10 on her twelfth birthday and double the gift on every subsequent birthday until the gift exceeds $1000. Write an algorithm to determine how old the girl will be when the last amount is given and what is that exact amount, and the total amount she would have received including the last gift, through all those years.