1.

1. Analyze the Problem
   1. Figure out the time difference between flash of lightning and the sound
   2. Look up the speed of sound: 1125.32808ft/sec
      1. Distance = rate \* time
2. Specifications
   1. Input: Time in seconds
   2. Output: Distance in miles
3. Design
   1. Write an algorithm – Input, Process, Output
4. Implement
   1. Write algorithm in a python program using IDLE
5. Test/Debug
   1. Run program and try it out. Fix any errors in the program
6. Maintain
   1. As I use the program I will find ways to enhance the program

2A.

1. Legal
2. Illegal
   1. A space is not accepted as a character that can be used in an identifier
3. Illegal
   1. A forward slash is not accepted as a part of an identifier. The result of this would be the division of two variables miles and gallons
4. Legal
5. Legal
6. Legal
7. Legal
8. Legal
9. Legal
10. Legal
11. Illegal
    1. Though numbers can be a part of a variable, they cannot be on the begging of the identifier. This will multiple 2 by the variable mpg

2B.

1. I would say milesPerGallon is the most acceptable. This identifier is in camelCase which is commonly used amongst coders. It is easy to read and identify as well.

3A.

1. A grouping of code that results in value.

3B.

1. x = 2
2. x = “Hello”
3. x = milesPerGallon
4. x = 5 \* 4
5. x = milesPerHour \* 6
6. x = “Hello”, “World”

4.

Hello

Harry

Hello, Harry

Hello

Harry

Herminone says 7 equals 7

Ron

Is confused

Done.

5.

1. x = 8
2. y = 13
3. z = 21