Problem Set 01

* 1. A. The main differences between printf() and puts() are as follows:
     1. puts() works well for strings where as printf() works for string, int, float, hexadecimal, char
     2. puts is also less expensive to process than printf
  2. The sizes 12345 and 123456789012 are different because the additional digits require additional bytes to be represented. 12345 is technically one word or 4 bytes, whereas 123456789012 is two words or 8 bytes.
  3. 3.14 is characterized as a double which uses 8 bytes whereas 3.14f is characterized as a float which uses 4 bytes
  4. It seems that each letter has the size of one byte and then an additional byte is used as it is cast as a char
  5. Bool has to take into account that any value other than 0 resolves to true. But the real answer might lie in the fact that RAM operates on bytes and not individual bits so the size has to be at least 1 byte.

1. The printed 0.1 is in accurately printed as 0.10000000149011611938. Some float values and values in general cannot be accurately represented on a machine possibly due to how the machine represents the number internally. Doubles have approximately double the precision of floats so that might lend to higher accuracy (0.10000000000000000555) but still not perfect.
2. It seems as if any non-zero numbers are represented as true.