1. RECAPITULATION
   a. Data types: integers, floats, strings*, and booleans.
      i. Operators work differently depending on the types.
      ii. We can convert between types.
   b. Variables.
      i. We can create new variables.
      ii. We can re-assign existing variables.
   c. Data structures: Lists.
      i. We can traverse lists using loops.
      ii. We can construct new lists using loops - show example.
   d. Functions:
      i. Built-in functions: e.g., abs(), len(), str(), help(), type().
      ii. Import functions from modules: e.g., math, random
      iii. Create our own functions: def.
      iv. Parameter passing.
      v. Returning results.
      vi. Scope of variables.
      vii. Calling functions from other functions.
   e. Conditionals: if, elif, else.
      i. Boolean expressions: ==, >, etc.
      ii. Logical expressions: or, and, not.
   f. Iteration:
      i. While loops: initialize variable, determine stopping condition, increment variable.
      ii. For loops: have a list to traverse.
      iii. Nested loops - often useful to break-up into functions.
      iv. Break statement. The return statement also breaks away from the loop (and from the whole function).
   g. Algorithms:
      i. Exhaustive enumeration.
   h. Programming style:
      i. Variable names.
      ii. Function names.
      iii. Comments.
      iv. Function description.
      v. Divide and conquer.
      vi. Defensive programming.
   i. Debugging:
      i. Pen and paper.
      ii. Testing things in the interactive interpreter.
      iii. Adding print statements in the script.

2. HOMEWORK #2 REVIEW
   a. Applications of programming to Cognitive and Information Sciences.
      i. Data analysis.
      ii. Agents, spatial navigation, learning.
      iii. Linguistic models, text analysis.
      iv. Neural networks, gene expression, evolutionary algorithms.
      v. Physical models.
      vi. Multi-agent systems, emergence, group behavior.
      vii. Fractals, chaotic systems.
      viii. Sound analysis, music interpretation.
      ix. Pattern recognition.
      x. Decision making, expert systems, decision trees.
      xi. Game theory.
      xii. Human experiments.
b. Farmyard problem.
c. Finding Nth prime.
d. Advanced problem: Find numbers which are equal to the sum of the factorial of their digits.
   i. Attempt with while loops, all in one function.
   ii. Rewrite using for loops.
   iii. Divide into different functions.