Read Ch. 1, at least up through page 17. Then, answer the following questions.

1. (3 pts) The name of this course is "Introduction to Computer Science". Yet, the authors of our textbook, in Chapter 1, indicate that there is some difficulty with applying the word "science" to Computer Science. They make the point that Computer Science is fundamentally different from Biology, Chemistry or Physics. Why do the authors make this claim—that is, what is different about Computer Science vs. those other fields?

2. (2 pts) The authors state that Computer Science is the study of Algorithms. According to the authors, what is an algorithm?
3. On p. 11, there is an example of a Python session. There are several symbols in this session. Describe what each of these symbols means:

(1 pts) >>>

(1 pts) *

(1 pts) //</

(1 pts) %

4. Read pages 10-17 about the three types of numbers that we can work with in the Python programming language. These include integers, floating-point, and complex numbers.

a. (1 pts) Which type of number would we use to represent your GPA?
Circle one: integer floating-point complex

b. (1 pts) Which type of number would we use to represent the number of pages of a book?
Circle one: integer floating-point complex

5. (1 pts) Which type of a number is 0?
Circle one: integer floating-point complex

6. Review pages 10-17, then answer these questions: at the Python prompt:

a. (1 pts) What can you type to compute 111 divided by 11, and get back an exact result (i.e. a result with decimals?)
b. (1 pts) If you type that, what answer do you get back? (Write the entire answer---all the decimal places)

c. (1 pts) What can you type to divide 111 by 11, and throw away any remainder?

d. (1 pts) What do you get if you type the expression from question c at the Python prompt?

e. (1 pts) What do you type to get the remainder of the division of 111 by 11?

7. Read pages 17-23 about variables and the assignment statement, and then answer these questions:

   a. (1 pts) What is the assignment statement that would give the variable $x$ the value of 100 divided by 11 (as a floating-point number).

   b. (1 pts) Type that assignment statement into Python. Then type $x * 11$ at the Python prompt, which should multiply the value of $x$ by 11. What value do you get back?
8. Read pages 23-28 about using the turtle module. You may like to try the statements from the book as you read about them—you'll learn more, and have more fun if you do. After you import turtle:

a. (1 pts) What do you type to create a new turtle named turandot?

b. (1 pts) Once you have a turtle named turandot, what do you type to cause turandot to move forward 75 pixels?

c. (1 pts) If turandot's current heading is 45 degrees, what direction is she facing?

d. (1 pts) What do you type at the Python prompt to determine turandot's current heading?

e. (1 pts) The book talks about something called a constructor. What is a constructor?

f. (1 pts) Which of the questions that you answered above involved a constructor?

g. The book talks about something called parameters.

(1 pts) Which of the answers to the questions above involves a parameter?

h. (1 pts) What was that parameter?

End of hw1