Homework1\_SS1

**Problem 1**

1. What is the difference between an Algorithm and a Program?

(a) An algorithm is a conceptual idea, a program is a concrete instantiation of an algorithm.

(b) An algorithm is limited to mathematical operation, a program can specify all kinds of operations.

(c) An algorithm makes a slow program run fast.

(d) An algorithm deals with computer hardware, a program deals with computer software.

2. True :A computational mode of thinking means that everything can be viewed as a math

problem involving numbers and formulas.

3. False: Computer Science is the study of how to build efficient machines that run programs.

4. The two things every computer can do are:

(a) Perform calculations

(d) Remember the results

5. In the following numeric expression, what is evaluated first? 4 ∗ a + 7/(x − y) + (n ∗ ∗3)

(a) (x − y)

**Problem 2**

1. A sequence of instructions is called a(n) .

(a) program

(b) high-level language

(c) interpreter

(d) flowchart

2. Writing Python statements is called .

(a) coding

(b) compiling

(c) interpreting

(d) processing

3. Which programming tool graphically depicts the logical steps to carry out a task and show how the

steps relate to each other?

(a) flowchart

(b) hierarchy chart

(c) algorithm

(d) pseudocode

4. Which programming tool uses English-like phrases with some Python terms to outline the task?

(a) algorithm

(b) hierarchy chart

(c) flowchart

(d) pseudocode

5. Integer division is accomplished using the operator.

(a) //

(b) %

(c) /

(d) /=**Problem 3** You are given the following pseudocode to determine if a number is even or odd. Create a flowchart for this program.

