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VHS Problem Set 6.5

1. Write a pseudocode algorithm that determines the batting average of a baseball player. (Hint: To compute a batting average, divide number of hits by number of at-bats. Batting averages have three decimal places.)
   1. Ask user for the number of hits
   2. Ask user for the number of at-bats
   3. Create a variable (double) called battingAverage equal to hits / at-bats
   4. Use a java method to shorten decimals to three
   5. Return battingAverage
2. Give examples of an integer literal, a floating-point literal, and a string literal.
   1. An example of an integer literal is 3.
   2. An example of a floating-point literal is 3.14159
   3. An example of a string literal is, “PI is 3.141592..”
3. Declare variables to represent a person’s name, age, and hourly wage.
   1. string personName = Bobarron;
   2. int personAge = 16;
   3. double hourlyWage = 7.5;
4. Why must care be taken to order the operators in an arithmetic expression?
   1. Because improper order of operations can lead to different answers, just like in math.
5. Is it possible to assign a value of type int to a variable of type double? Why or why not?
   1. Yes, because an integer can stand in for a double, however a double cannot stand in for an integer without losing all the data following the decimal point.
6. State which of the following are valid Java identifiers. For those that are not valid, explain why.
   1. length
      1. Yes, because it starts with a letter, and doesn’t contain any invalid characters.
   2. Import
      1. No, because import is a reserved keyword for java.
   3. 6months
      1. No, because it starts with a number rather than a letter.
   4. Hello-and-goodbye
      1. No, because it contains invalid characters.
   5. HERE\_AND\_THERE
      1. Yes, because it starts with a letter, and underscores are valid characters.