What is Python? Pre-Assessment Answer Key

Directions
Answer the following questions the best you can. You are not expected to know the answers, and this assignment will not be graded.

1. Sonya wants to write a program to pack her suitcase automatically. Describe how Sonya should use for/while loops and/or if/else statements to write code for the following:

    a. Packing a number shirts (**num_shirts**) into her suitcase.
    A for loop could be used to describe packing all the suitcases in a few lines of code:

    for i in range(num_shirts):
          pack(shirt(i))

    NOTE: Students may also describe using a loop for this without providing example code for full credit

    b. Packing a number **num_pants** pairs of pants (**num_pants)** *if* the temperature is less than 50 degrees, otherwise packing a number pairs of shorts (**num_shorts)**.
    An if statement could be used to check the temperature and a for loop could be used for each of the packing descriptions:

    if (temp < 50):
          for i in range(num_pants):
              pack(pants(i))
    else:
          for i in range(num_shorts):
              pack(shorts(i))

2. Why might a computer need to organize variables/objects into specific data types/categories?
Each type/category takes up a different amount of space in the machine
Certain data types containing numerical data should be added, subtracted, and mathematically manipulated easily, while others contain alphabetical data that should be edited easily
NOTE: These are just some example answers, other student answers may be considered correct at the teacher's discretion.

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