Homework – Solutions

Task 1 .

Read the Python program below:

| 1  2  3  4  5 | num1 = int(input())  num2 = 10 + num1 \* 2  print(num2)  num1 = 20  print(num1) |
| --- | --- |

**Question 1**

When this program is executed, if the user types 10 on the keyboard, what will be displayed on the screen as a result of executing **line 3**?

* 1. 30
  2. 40
  3. 10 + 10 \* 2
  4. 10 + num1 \* 2

**The correct answer is A: 30.**

Operator precedence is important for the calculation (answer B). Expressions are **evaluated** during execution, and it’s their value that is stored in variables (answers C and D).

**Question 2**

When this program is executed, if the user types 10 on the keyboard, what will be displayed on the screen as a result of executing **line 5**?

* 1. 10
  2. 20
  3. 10 and 20
  4. There is an error in the program because a variable cannot hold two values at the same time

**The correct answer is B: 20.**

Line 4 **replaces** the value of num1 (answer A); it does not assign it an additional value (answer D). Variables can only hold a single value at any given time (answer C).

Task 2 .

**Rearrange** the lines in the Python program below, so that you have a runnable program that holds a meaningful interaction with the user.

| 1  2  3  4  5 | print("And where do you live", name)  print("I’ve never been to", location)  name = input()  print("What is your name?")  location = input() |
| --- | --- |

Write your rearranged program below:

| 4  3  1  5  2 | print("What is your name?")  name = input()  print("And where do you live", name)  location = input()  print("I’ve never been to", location) |
| --- | --- |

Task 3

The **incomplete** program below is supposed to prompt the user for a distance in miles, and convert the distance that the user enters to kilometres.

| 1  2  3  4 | print("Enter a distance in miles:")  miles = float(input()) # int is also correct.  kilometres = 1.60934 \* miles.  print(miles, "miles is", kilometres, "km") |
| --- | --- |

**Step 1**

**Complete** line 2 so that the value assigned to the miles variable is obtained from what the user types on the keyboard.

**Step 2**

**Complete** line 3 so that the program calculates the value of the kilometres variable to be the equivalent of the miles variable, converted to kilometres. Note that 1 mile is equal to 1.60934 kilometres.

Resources are updated regularly - the latest version is available at: [the-cc.io/curriculum](http://the-cc.io/curriculum).



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