

ICS20 - Python Review

Choose the best variable declaration for the following types of information if `x = input()`:

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|---|---|--|
| 1. Width of a cell
phone in
centimeters | A. <code>pw = float(x)</code>
C. <code>pw = int(x)</code> | B. <code>phoneWidth = float(x)</code>
D. <code>phoneWidth = int(x)</code> |
| 2. Average height in
meters | A. <code>avgHeight = float(x)</code>
C. <code>height = int(x)</code> | B. <code>height = float(x)</code>
D. <code>avgHeight = int(x)</code> |
| 3. Your middle initial | A. <code>middleInitial = char(x)</code>
C. <code>i = char(x)</code> | B. <code>initial = int(x)</code>
D. <code>middleInitial = int(x)</code> |

Given the following declaration and operations, what is the final value of variable?

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|---|---------|--------|---------|---------|
| 4. <code>x = float(5)</code>
<code>x += 1;</code> | A. 5 | B. 6 | C. 6.0 | D. 5.0 |
| 5. <code>a = int(4)</code>
<code>a = a*2</code>
<code>a -= 2</code> | A. 4 | B. 6.0 | C. 4.0 | D. 6 |
| 6. <code>b = int(4*3.1)</code>
<code>b = b % 5</code>
<code>b /= 2</code> | A. 12.4 | B. 4.5 | C. 1 | D. 0 |
| 7. <code>c = float(5*2.5)</code>
<code>c = c // 2</code> | A. 6.0 | B. 6 | C. 6.25 | D. 0.25 |
8. Which of the following lines will produce the output "1 + 2 = 3"
- A. `print(1+2, "=3")`
 - B. `print(1 + 2 = 3)`
 - C. `print(1,"+", 2,"=",3)`
 - D. `print(str(1) + "+" + str(2) + "=" + str(3))`
9. Which of the following lines will produce the output "**Math** is 12 % 5 = 2"
- A. `print("\\"Math\\" is ",6+6,"%", int(5.3),"=", 1+1)`
 - B. `print("\\"Math\\" is " + "12 % 5 = 2")`
 - C. `print("Math is " + "12 % 5" + " = 2")`
 - D. `print("""Math" is ", 6+6, int(5.3), 1+1)`
10. To scan a float from the keyboard, select the best line of code:
- A. `myFloat = float()`
 - B. `myFloat = input()`
 - C. `myFloat = int(input())`
 - D. `myFloat = float(input())`

Given the following variable declarations,
choose **TRUE (A)** or **FALSE (B)** for each of the following questions:

```
a = int(13)
b = int(5)
c = float(10)
d = float(1.5)
```

- | | | |
|--------------------------------------|---|---|
| 11. $(a > b \text{ and } a / 2 > b)$ | T | F |
| 12. $((a - c) < (d - 3.5))$ | T | F |
| 13. $(\text{int}(c / 3) \% 3 > 0)$ | T | F |
| 14. $(a - 13 == 0)$ | T | F |
| 15. $(d * 2 == b \% 10)$ | T | F |
| 16. $(42 < a + b + c + d)$ | T | F |

17. Write the one line necessary to declare "score" as an int, initialized to zero.

18. Write the first line of an if statement that will check if a mark entered, "mark" is less than or equal to 0 or greater than 100.

If _____

19. In the space available below:

- A. Print out a statement asking the user to enter an integer
- B. Read in a value from the user, storing it as an integer
- C. If the number is above 100, print out a message saying "Above 100"
- D. Otherwise print out a message saying "Not more than 100"

22. Convert the following Small Basic code to Python.

```
number = 1
```

```
While (number<>0)
    TextWindow.WriteLine("Please enter a number (type 0 to exit):")
    number = TextWindow.Read()
    if number > 0 then
        TextWindow.WriteLine("positive")
    elseif number < 0 then
        TextWindow.WriteLine("negative")
    else
        TextWindow.WriteLine("zero")
    endif
EndWhile
```

