

Week 04: Problem Set

Due: 2023-02-10 23:59:00

Description: Chapter 4 problem set

Self Grade: 0 of 15 = 0.0%

You have marked this assignment Finished. Click to mark it

In Progress

Questions

Not yet graded

Q-1: Which of the following is **not** a boolean expression?

- ☐ A. True
- ☐ B. 3 == 4
- ☒ C. 3 + 4
- ☐ D. 3 + 4 == 7

Check Me

Compare me

✓ 3 + 4 evaluates to 7, which is a number, not a Boolean value.

Activity: 4.11.1 Multiple Choice (cndtnl-ex-mc-bool)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-bool)

Not yet graded

Q-2: Which of the following properly expresses the precedence of operators (using parentheses) in the following expression: 5*3 > 10 and 4+6==11

- ☒ A. ((5*3) > 10) and ((4+6) == 11)
- ☐ B. (5*(3 > 10)) and (4 + (6 == 11))
- ☐ C. (((5*3) > 10) and 4)+6) == 11
- ☐ D. ((5*3) > (10 and (4+6))) == 11

Check Me

Compare me

✓ Yes, * and + have higher precedence, followed by > and ==, and then the keyword "and"

Activity: 4.11.2 Multiple Choice (cndtnl-ex-mc-operators)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-operators)

Not yet graded

Q-3: What does the following code print?

```
if 4 + 5 == 10:
    print("TRUE")
else:
    print("FALSE")
print("TRUE")
```

- a. TRUE
- b. TRUE
FALSE
- c. FALSE
TRUE
- d. TRUE
FALSE
TRUE

- ☐ A. Output a
- ☐ B. Output b
- ☒ C. Output c
- ☐ D. Output d

Check Me

Compare me

✓ Python will print FALSE from within the else-block (because 5+4 does not equal 10), and then print TRUE after the if-else statement completes.

Activity: 4.11.3 Multiple Choice (cndtnl-ex-mc-output)

Question in Context (/ns/books/published/cmsc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-output)

Not yet graded

Q-4: What does the following code print?

```
x = -10
if x < 0:
    print("The negative number ", x, " is not valid here.")
print("This is always printed")
```

- a. This is always printed
- b. The negative number -10 is not valid here
This is always printed
- c. The negative number -10 is not valid here

- ☐ A. Output a
- ☒ B. Output b
- ☐ C. Output c
- ☐ D. It will cause an error because every if statement must have an else statement.

Check Me

Compare me

✓ Python executes the body of the if-block as well as the statement that follows the if-block.

Activity: 4.11.4 Multiple Choice (cndtnl-ex-mc-negative)

Not yet graded

Q-5: Which of I, II, and III below gives the same result as the following nested if?

```
# nested if-else statement
x = -10
if x < 0:
    print("The negative number ", x, " is not valid here.")
else:
    if x > 0:
        print(x, " is a positive number")
    else:
        print(x, " is 0")
```

I.

```
if x < 0:
    print("The negative number ", x, " is not valid here.")
else x > 0:
    print(x, " is a positive number")
else:
    print(x, " is 0")
```

II.

```
if x < 0:
    print("The negative number ", x, " is not valid here.")
elif x > 0:
    print(x, " is a positive number")
else:
    print(x, " is 0")
```

III.

```
if x < 0:
    print("The negative number ", x, " is not valid here.")
if x > 0:
    print(x, " is a positive number")
else:
    print(x, " is 0")
```

- ☐ A. I only
- ☒ B. II only
- ☐ C. III only
- ☐ D. II and III
- ☐ E. I, II, and III

Check Me

Compare me

✔ Yes, II will give the same result.

Activity: 4.11.5 Multiple Choice (cndtnl-ex-mc-chainedNested)

Not yet graded

Q-6: Which of the following is true about the code below?

```
x = 3
if (x > 2):
    x = x * 2;
if (x > 4):
    x = 0;
print(x)
```

- ☐ A. x will always equal 0 after this code executes for any value of x
- ☐ B. if x is greater than 2, the value in x will be doubled after this code executes
- ☒ C. if x is greater than 2, x will equal 0 after this code executes

Check Me

Compare me

✓ If x is greater than 2, it will be set to 0.

Activity: 4.11.6 Multiple Choice (cndtnl-ex-mc-ifs)

Question in Context (/ns/books/published/cmsc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-ifs)

Not yet graded

Q-7: What is the total for 12 items that weigh 3 pounds?

```
weight = 0.5
numItems = 5
if weight < 1:
    price = 1.45
if weight >= 1:
    price = 1.15
total = weight * price
if numItems >= 10:
    total = total * 0.9
print(weight)
print(price)
print(total)
```

- ☐ A. \$3.45
- ☐ B. \$3.11
- ☒ C. \$3.105
- ☐ D. \$3.10

Check Me

Compare me

✓ This is the actual result. But, can you pay \$3.105?

Activity: 4.11.7 Multiple Choice (cndtnl-ex-mc-weight)

Question in Context (/ns/books/published/cmsc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-weight)

Not yet graded

Q-8: Which of the following will evaluate to true?

- I. True AND False
- II. False or True
- III. False AND (True or False)

- ☐ A. I
- ☒ B. II
- ☐ C. I and II
- ☐ D. II and III

Check Me

Compare me

✓ The statement can be either True or False which evaluates to True.

Activity: 4.11.8 Multiple Choice (cndtnl-ex-mc-tf)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-tf)

Not yet graded

Q-9: Given two variables, num1 and num2 , which of the following would mean that both num1 and num2 are positive integers?

- ☐ A. (num1 == num2)
- ☐ B. (num1 == num2) or (num1 > 0)
- ☐ C. (num1 == num2) and (num1 < 0)
- ☒ D. (num1 == num2) and (num1 > 0)

Check Me

Compare me

✓ If num1 is equal to num2 and num1 is greater than 0, then both values must be positive.

Activity: 4.11.9 Multiple Choice (cndtnl-ex-mc-equal_v2)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-equal_v2)

Not yet graded

Q-11: What is the output from the following code?

```
a = 3
b = (a != 3)
print(b)
```

- ☐ A. True
- ☒ B. False
- ☐ C. 0
- ☐ D. 3
- ☐ E. Syntax error

Check Me

Compare me

✓ A is equal to three so this statement is false.

Activity: 4.11.11 Multiple Choice (cndtnl-ex-mc-not-equal-test)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-not-equal-test)

Not yet graded

The following program should calculate the total price, but the lines are mixed up. The price is based on the weight. Items that weigh less than 2 pounds should cost 1.5 . Items that weigh more than 2 pounds should cost 1.3 . Be sure to indent correctly!

Drag from here

Drop blocks here

1

weight = 0.5
numItems = 5
if weight < 2:

2

price = 1.50

3

if weight >= 2:

4

price = 1.30
total = weight * price
print(weight)
print(price)
print(total)

Check

Reset

Help me

Parsons (cndtnl-mixed-price)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/MixedupCode.html#cndtnl-mixed-price)

Not yet graded

Complete the pay computation to give the employee 1.5 times the hourly rate for hours worked above 40 hours, if the regular pay rate is \$10 an hour. Then set grossPay equal to the amount an employee would be paid for working 45 hours.

Save & Run

Show CodeLens

Original - 1 of 1

```
1 hours = 45
2 rate = 10
3 overtimeRate = #your code here
4 grossPay = 0
5 if hours #your code here
6     grossPay = hours * rate
7 else:
8     overTime = #your code here
9     grossPay = #your code here
10 print(grossPay)
11
12
```

Activity: 4.13.4 ActiveCode (cndtnl-wc-payq)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/WriteCode.html#cndtnl-wc-payq)

Not yet

graded

Write the code to calculate and print the cost of a 14 mile cab ride. If the distance traveled is less than or equal to 12 miles the cost is \$2.00 a mile, and if the distance traveled is more than 12 miles the cost is \$1.50 a mile. Assign the final cost to the variable `total`.

Save & Run

Show CodeLens

Original - 1 of 1

```
1 distance = 14
2
3
```

Activity: 4.13.7 ActiveCode (cndtnl-wc-distanceq)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/WriteCode.html#cndtnl-wc-distanceq)

Not yet
graded

Q-12: Which of the following evaluates to True when `a` is equal to `b` or when `a` is equal to 5 ?

- ☐ A. `a == b == 5`
- ☐ B. `a = b or a = 5`
- ☒ C. `a == b or a == 5`
- ☐ D. `a = b and a = 5`
- ☐ E. `a == b and a = 5`

Check Me

Compare me

✓ This will be true if `a` is equal to `b` or `a` is equal to 5.

Activity: 4.11.12 Multiple Choice (cndtnl-ex-mc-which-for-or)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-which-for-or)

Not yet
graded

Q-10: True is what type of variable?

- ☐ A. float
- ☐ B. string
- ☒ C. boolean
- ☐ D. integer

Check Me

Compare me

✓ True is a boolean value.

Activity: 4.11.10 Multiple Choice (cndtnl-ex-mc-true)

Question in Context (/ns/books/published/cmssc-210-spring-2023/conditional/Exercises.html#cndtnl-ex-mc-true)

You have marked this assignment Finished. Click to mark it

In Progress

This assignment is graded and is no longer accepting submissions. You can still do the work, but it is up to your instructor whether they will accept it or not.

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