Week 1 Graded Assignment 1

The due date for submitting this assignment has passed.
Due on 2026-02-18, 23:59 IST.
You may submit any number of times before the due date. The final submission will be considered for grading.
You have last submitted on: 2026-02-17, 17:34 IST

1) *1 point*
What will be the output type of the expression `5 + 2` ?

- (selected) int
- float
- str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

int

2) *1 point*
What will be the output type of the expression `5 / 2` ?

- int
- (selected) float
- str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

float

3) *1 point*
What will be the output type of the expression `5 ** 2.0` ?

- int
- (selected) float
- str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

float

4) *1 point*
What will be the output type of the expression `"5 + 2"` ?

- int
- float
- (selected) str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

str

5) *1 point*
What will be the output type of the expression `5 and 2 or "2"` ?

- (selected) int
- float
- str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

int

6) *1 point*
What will be the output type of the expression `555[2]` ?

- int
- float
- str
- bool
- (selected) Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

Invalid Expression (raises an error)

7) *1 point*
What will be the output type of the expression `"555"[2]` ?

- int
- float
- (selected) str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

str

8) *1 point*
What will be the output type of the expression `"555"[:2]` ?

- int
- float
- (selected) str
- bool
- Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

str

9) *1 point*
What will be the output type of the expression `555[::2]` ?

- int
- float
- str
- bool
- (selected) Invalid Expression (raises an error)

Yes, the answer is correct.
Score: 1

Accepted Answers:

Invalid Expression (raises an error)

10) *1 point*
What will be the output type of the expression `"555"*["2"]*` ?

- int
- float
- str
- bool
- (selected) Invalid Expression (raises an error)

No, the answer is incorrect.
Score: 0

Accepted Answers:

str

11) *1 point*
What will be the output type of the expression `5 + float(2)` ?

- int
- (selected) float
- str
- bool
- Raises an error

Yes, the answer is correct.
Score: 1

Accepted Answers:

float

12) *1 point*
What will be the output type of the expression `int(5.0) + float("2")` ?

- int
- (selected) float
- str
- bool
- Raises an error

Yes, the answer is correct.
Score: 1

Accepted Answers:

float

13) *1 point*
What will be the output type of the expression `str(5) + str(2.0)` ?

- int

- float
- str
- bool
- Raises an error

Yes, the answer is correct.
Score: 1

Accepted Answers:

str

14) *2 points*
Select the expression(s) that are equivalent to the given expression.

```
3 + 4 * 5 // 2
```

- `3 + (4 * (5 // 2))`
- `3 + ((4 * 5) // 2)`
- `(3 + 4) * (5 // 2)`
- `((3 + 4) * 5) // 2`

Yes, the answer is correct.
Score: 2

Accepted Answers:

`3 + ((4 * 5) // 2)`

15) *2 points*
Select the expression(s) that are equivalent to the given expression.

```
10 // 2 * 5 ** 2
```

- `((10 // 2) * 5) ** 2`
- `(10 // 2) * (5 ** 2)`
- `10 // (2 * 5) ** 2)`
- `(10 // (2 * 5)) ** 2`

Yes, the answer is correct.
Score: 2

Accepted Answers:

`(10 // 2) * (5 ** 2)`

16) *2 points*
Select the expression(s) that are equivalent to the given expression.

```
(1 + 2) * (3 + 4)
```

- `(1 + (2 * (3 + 4)))`
- `(1 + 2) * 3 + 4`
- `((1 + 2) * (3 + 4))`
- `1 + (2 * 3) + 4`

Yes, the answer is correct.
Score: 2

Accepted Answers:

`((1 + 2) * (3 + 4))`

17) *2 points*
Select the expression(s) that are equivalent to the given expression.

```
4 + 3 > 2 * 1
```

- `(4 + 3) > (2 * 1)`
- `4 + (3 > (2 * 1))`
- `(4 + 3 > 2) * 1`
- `4 + (3 > 2) * 1`

Yes, the answer is correct.
Score: 2

Accepted Answers:

`(4 + 3) > (2 * 1)`

18) *2 points*
Select the expression(s) that are equivalent to the given expression.

```
a and not b or not c
```

- `(a and (not b)) or (not c)`
- `(a and not b) or (not c)`
- `a and (not (b or not c))`
- `a and ((not b) or (not c))`

Yes, the answer is correct.
Score: 2

Accepted Answers:

`(a and (not b)) or (not c)`
`(a and not b) or (not c)`

19) *2 points*
How does the Python interpreter parenthesize the following expression?

```
0 ** 1 ** 2 ** 3 ** 2
```

- `(((0 ** 1) ** 2) ** 3) ** 2`
- `(0 ** (((1 ** 2) ** 3) ** 2))`
- `0 ** (1 ** (2 ** (3 ** 2)))`
- `(0 ** ((1 ** 2) ** (3 ** 2)))`

Yes, the answer is correct.
Score: 2

Feedback:

The power operator `**` has right to left associativity. Hence, option (c) is the correct way of computation.

Accepted Answers:

`0 ** (1 ** (2 ** (3 ** 2)))`

20) *2 points*
Select the correct statement(s) about `print` in python.

- `print` is a keyword.
- `print` can be used to disply any data type.
- `print` atleast require one value.
- `print` prints new line character at the end of the line.

Yes, the answer is correct.
Score: 2

Accepted Answers:

`print` can be used to disply any data type.
`print` prints new line character at the end of the line.

21) *2 points*
Select the correct statement(s) about `input` in python.

- Output type can be passed to `input` as `input(type)` to get output in the required type.
- `input` accepts atmost one argument.
- `input` is a built-in function.
- `input` can be only used in python scripts and not in REPL/Notebook.

Yes, the answer is correct.
Score: 2

Accepted Answers:

`input` accepts atmost one argument.
`input` is a built-in function.

22)
Common data for the next 3 questions
This set of questions is intended for you to practice python tutor and get used to it. Watch this tutorial on how to use python tutor before attempting this questions.
Consider the code present in this python tutor link.
Answer the following questions by using the python tutor interface.
What is the value of `a` after executing line 3, using the input already given?

12

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 12

1 point

23)
What is the value of `a` after executing line 4, if input given changed to 14?

43

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 43

1 point

24)
What is the value of `a` after executing line 5, if the input is changed to 23?

35

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 35

1 point

25)
Common data for the next 3 questions
This set of questions is intended for you to practice python tutor and get used to it. Watch this tutorial on how to use python tutor before attempting this questions.
Consider the code present in this python tutor link.
Answer the following questions by using the python tutor interface.
What is the value of `a` after executing line 3, using the input already given?

5

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 5

1 point

26)
What is the value of `a` after executing line 4, if input given changed to 13?

70

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 70

1 point

27)
What is the value of `a` after executing line 5, if the input is changed to 8?

22

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 22

1 point

28)
Common data for the next 2 questions
Consider the following string:

```
word = "138412345678901938"
```

For what values of `a` and `b` does the following expression evaluate to `True`? Assume that both `a` and `b` are **positive integers**.

```
word[a : b] == "123456789"
```

Enter the value of `a`. (NAT)

4

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 4

1 point

29)
Enter the value of `b`.

13

Yes, the answer is correct.
Score: 1

Accepted Answers:

(Type: String) 13

1 point

2 points

30)
`E` is a boolean variable. Consider the following sequence of expressions:

```
not E
not not E
not not not E
not not not not E
-
-
-
```

This pattern keeps repeating for a thousand lines. If line number 500 evaluates to `False`, what is the value of `E`?

Hint: Two negatives make a positive.

- `True`
- `False`
- Cannot be determined

Yes, the answer is correct.
Score: 2

Feedback:

This pattern evaluates `True` and `False` for the alternate line because one `not` operator is added in expression each time. So, if line number `500` evaluates to `False` that means the even-number line evaluates `False` and the odd-number line evaluates `True`. This means the line number `1` which is `not E` will be evaluated as `True`. So, the value of `E` is `False`. Hence, option (b) is correct.

Accepted Answers:

`False`