**TASK 2, LAB 2** (from now-gone Coursera course)

**IMPORTANT:** In the multiple choice questions below more than one answer may be correct

Answer the following questions. Some of the questions will require you to run code in IDLE's Python shell. (You should do this anyway to get used to using IDLE.)

In case you want extra practice, here are suggested exercises from the textbook (these will not be marked):

- Chapter 2 exercises 1, 2, 4, 8.
- Chapter 3 exercises 2, 3, 4, 8

# Question 1

Select the function call(s) that run without error. Determine the answer using the description given by `help(round)`, not by running the code.

| Your Answer | | Score | Explanation |
|---|---|---|---|
| ⬤ `round(45.345, 2, 5)` | | | |
| `round(45.8)` | | | |
| `round(45.345, 2)` | | | |

⬤  round()

✏  round(45)

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**Question Explanation**

The function `round` takes one argument, as well as a second optional argument.

```
Help on built-in function round in module builtins:

round(...)
    round(number[, ndigits]) -> number

    Round a number to a given precision in decimal digits (default 0 digits).
    This returns an int when called with one argument, otherwise the
    same type as the number. ndigits may be negative.
```

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# Question 2

What type of value does built-in function `id` return? Determine the answer using the description given by `help(id)`.

| Your Answer | Score | Explanation |
| --- | --- | --- |

⬤  `float`

✏  `int`

> **Question Explanation**
>
> Here is the output of `help(id)` . The return type is to the right of the arrow:
>
> ```
> id(...)
>     id(object) -> integer
>
>     Return the identity of an object.  This is guaranteed to be unique among
>     simultaneously existing objects.  (Hint: it's the object's memory address.)
> ```

# Question 3

Consider this code:

```
x = 12 / 3
```

What value does `x` refer to?

### Your answer:

4.0

**Question Explanation**

The division operation ( `/` ) produces a `float` . Note that the question just asks for a value, so don't include any other information other than the value.

# Question 4

Consider this code:

```
x = 12 // 3
```

What value does `x` refer to?

### Your answer:

4

**Question Explanation**

The integer division operation ( `//` ) produces an `int` . Note that the question just asks for a value, so don't include any other information other than the value.

# Question 5

Consider this code:

```
x = 12 / 5
```

What value does  x  refer to?

Your answer:

2.4

**Question Explanation**

The division operation ( / ) produces a  float . Note that the question just asks for a value, so don't include any other information other than the value.

# Question 6

Consider this code:

```
x = 13 / 7
```

What value does  x  refer to?

### Your answer:

1.85714285714

### Question Explanation

The division operation ( / ) evaluates to a  float . Note that the question just asks for a value, so don't include any other information other than the value.

# Question 7

Consider this code:

```
x = 3
y = 5
x = y
```

After the code above has executed, what value does  x  refer?

### Your answer:

5

**Question Explanation**

Note that the question just asks for a value, so don't include any other information other than the value.

# Question 8

Consider this code:

```
x = 3
y = 5
x = y
```

After the code above has executed, what value does y refer?

Your answer:

5

# Question 9

Consider this code:

```
apple = banana
```

When the code above is executed, what type of error occurs?

**Your Answer**

- ✓ `NameError`

- ⬤ `SyntaxError`

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**Question Explanation**

The name `banana` does not exist, so a `NameError` occurs.

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# Question 10

Select the legal Python name(s) below.

| Your Answer | Score | Explanation |
|---|---|---|
| ⬤ `haPpyDAY` | | |
| 🖌 `_happy` | | |
| ⬤ `18happy_day` | | |
| 🖌 `happy_day` | | |

**Question Explanation**

1. Names must start with a letter or `_` .
2. Names must contain only letters, digits, and `_` .

# Question 11

Consider this code:

```
def greater(one, two):
    return one > two
```

Select the phrase that describes `two` .

| Your Answer | Score | Explanation |
|---|---|---|
| 🖌 a parameter | | |

○ a function name

○ an argument

**Question Explanation**

Review this terminology in the "Defining Functions" video and lecture summary.

# Question 12

Consider this code:

```
def example(a, b, c):
    d = a + b - c
    return d
```

How many parameters does function `example` have?

| Your Answer | Score | Explanation |
| --- | --- | --- |
| ○ 2 | | |
| ○ 1 | | |
| ○ 3 | | |
| ○ 0 | | |

**Question Explanation**

The parameters are `a` , `b` and `c` . Review this terminology in the "Defining Functions" video and lecture summary.

# Question 13

Consider this code:

```
value = 8.564
result = round(value)
```

Select the phrase that describes `value` in the **second** line.

| Your Answer | Score | Explanation |
| --- | --- | --- |
| ⬤ a parameter | | |
| ⬤ a function name | | |
| ⬤ an argument | | |

**Question Explanation**

The value of `value` is passed as an argument to function `round` .

# Question 14

Consider this code:

```
round(45.342, 2)
```

What value does the expression above produce?

Your answer:

45.34

**Question Explanation**

Note that the question just asks for a value, so don't include any other information other than the value.

# Question 15

Consider this code:

```
def bigger(x):
    return x ** x

bigger(12)
```

Which value does `bigger(12)` produce?

| Your Answer | Score | Explanation |
|---|---|---|
| ⚪ 285311670611 | | |
| ⚪ 302875106592253 | | |
| ⚪ 8916100448256 | | |
| ⚪ 11112006825558016 | | |