ANSWER KEY

Lesson Quiz Answer Key

The quiz is worth 12 points. Each Part A item is worth one point, and each Part B item is worth two. Give a Part B answer 2 points when it has the sample's idea, in any words, and 1 when it is partly right.

Part A: Multiple choice

Quick key: 1-A 2-B 3-A 4-C 5-C 6-A 7-B 8-C

1. Correct: (A)

```
n = 20
n //= 6
n *= 5
print(n)
```

Output

```
15
```

`n //= 6` *rounds down to a whole number, so* `n` *holds 3. Then* `n *= 5` *makes it 15.*

2. Correct: (B)

```
print(2 ** 3 ** 2)
```

Output

```
512
```

`**` *works right to left. Python works out* `3 ** 2` *first, which is 9, and then* `2 ** 9`*, which is 512.*

3. Correct: (A)

```
print(-3 ** 2)
```

Output

```
-9
```

`**` *goes before the minus sign in front.* `3 ** 2` *is 9, and then the minus flips the sign to -9.*

4. Correct: (C)

```
x = 5
x **= 2
print(x)
```

Output

```
25
```

`x **= 2` *raises 5 to the 2nd power, which is 5 times 5, or 25.*

5. Correct: (C) `# print("test")`

A `#` at the start makes the whole line a comment, so Python skips it. A `#` at the end leaves the code on.

6. Correct: (A) The line number the Error panel names

The Error panel names the line where Python stopped, and the line numbers at the left help him find it.

7. Correct: (B) 4 spaces in from the left edge

The line ends in a colon, so auto-indent starts the next line 4 spaces in.

8. Correct: (C)

```
tickets = 23
tickets %= 5
print(tickets)
```

Output

```
3
```

23 tickets make 4 groups of 5, which hold 20. `%=` keeps the remainder, which is 3.

Part B: Written answers

9. Sloane expected this program to print 5, but it printed 5.0. Explain why, and name the update operator that keeps a whole number. Write 2 sentences.

```
1  ramps = 10
2  ramps /= 2
3  print(ramps)
```

Look for

- `/=` always gives a decimal, so 10 divided by 2 gives 5.0.
- `//=` keeps a whole number, so `ramps //= 2` gives 5.

Model response

`/=` always gives a decimal, so `ramps` holds 5.0. Using `ramps //= 2` keeps a whole number, so the program prints 5.

10. This program stops with an error. Explain the bug, and write the fixed line. Write 2 sentences.

```
1  score = 4
2  score **= 2
3  print(Score)
```

Error

Line 3: Python says: `NameError: name 'Score' is not defined`

Look for

- Line 3 uses `Score` with a capital S, but the variable is `score`, so Python finds no value for it.
- The fixed line is `print(score)`.

Model response

Line 3 asks for `Score`, but the program made `score` with a small s. The fixed line is `print(score)`, which prints 16.