|  |  |  |  |
| --- | --- | --- | --- |
| **Expression** | **Expected value** | **Calculated value** | **Reason for calculated value** |
| math.sqrt(9) | 3 | 3.0 | The function returns a float square root of the argument. |
| math.sqrt(-9) | 3i | ValueError | Python is unable to calculate complex numbers. |
| math.floor(3.7) | ? | 3 | Returns the smallest integer less or equal to the argument in this case 3. |
| math.ceil(3.7) | ? | 4 | Returns the greatest integer greater or equal to the argument, in this case -4. |
| math.ceil(-3.7) | ? | -3 | Returns the greatest integer greater or equal to the argument, in this case -3. |
| math.copysign(2, -3.7) | ? | -2 | Returns the value of the first argument but assigns it the sign of the second argument. |
| math.trunc(3.7) | 3 | 3 | Truncates the argument entered to the nearest whole number. |
| math.trunc(-3.7) | -3 | -3 | Truncates the argument entered to the nearest whole number. |
| math.pi | 3.142 | 3.141592653589793 | Gives the value of pi to 15 decimal places. |
| math.cos(math.pi) | -1 | -1.0 | Returns the cosine of pi radians as a float. |

**Qn. In addition to the above expressions, type the following code into the Python interactive mode:**

**math.pi = 3**

**math.pi**

**What happens and why?**

* When I type math.pi = 3, math.pi will give 3. This is because the saved value of pi was overwritten with 3