|  |  |  |  |
| --- | --- | --- | --- |
| Expression | Expected value | Calculated value | Reason for calculated value |
| math.sqrt(9) | 3 | 3.0 | 3 is the square root of 9 |
| math.sqrt(-9) | Math error | math.sqrt(-9)  ValueError: math domain error | Mathematical, a negative number has no square root |
| math.floor(3.7) | ? | 3 | The expression rounds the number down to the nearest integer |
| math.ceil(3.7) | ? | 4 | The expression rounds the number down to the nearest integer |
| math.ceil(-3.7) | ? | -3 | The expression rounds the number down to the nearest integer |
| math.copysign(2,-3.7) | ? | -2.0 | Generally,  math.copysign(x,y) returns a float with the magnitude of x but with the sign of y |
| math.trunc(3.7) | 3 | 3 | The expression truncates the number to the nearest integer |
| math.trunc(-3.7) | -3 | -3 | The expression truncates the number to the nearest integer |
| math.pi | 3.141592653589793 | 3.141592653589793 | Pi is a consatant which is equal to 3.141592653589793 |
| math.cos(math.pi) | -1.0 | -1.0 | The expression returns the cosine of pi in radians thus -1 |

math.pi=3

math.pi

What happened and why?

3 is the output. This is because pi in the expression math.pi=3 is assigned to 3 which means makes the value of math.pi is 3 when it’s called