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3.7.3 Finger Exercise: A single step of gradient descent on a two variable problem

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Finger Exercises 4 due Sep 7, 2023 05:00 IST Completed

Problem: Determine objective function after one step

4.0/4.0 points (graded)

MO2.11 **MO2.12**

Consider the objective function

$$J(x, y) = \sin(\pi x) + \cos(\pi y) \quad (3.36)$$

and the initial point $(x^0, y^0) = (1.0, 0.5)$. Apply gradient descent for one iteration with a step size of $\alpha = 1/(2\pi)$ to find (x^1, y^1) and $J(x^1, y^1)$.

What is x^1?

1.5 ✔ Answer: 1.5

What is y^1?

1.0 ✔ Answer: 1

What is $J(x^1, y^1)$?

-2 ✔ Answer: -2

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