

Description Given the function $f(\mathbf{x}, \mathbf{y}) = \mathbf{x}^2 + \mathbf{x}\mathbf{y} + \mathbf{y}^2$, you may use "gradient descent" to compute a local minimum. In this quiz, you are asked to perform only the "first step" of gradient descent, by starting with $\mathbf{x} = 1$ and $\mathbf{y} = 5$, and using the learning rate $= 0.01$.

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| Question | What is the new value for \mathbf{x} after one iteration of gradient descent? |
| Answer | 0.93 |

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| Question | What is the new value for \mathbf{y} after one iteration of gradient descent? |
| Answer | 4.89 |