Name:

Instructions. You have 30 minutes to work on the problem below. This problem will give you 5 extra credit points to your MT-2 exam result. You have to show full work to receive 5 points.

Books, notes, and other resources are not allowed.

1. **[5 points]** Use Lagrange multipliers to find the maximum product of two positive numbers satisfying $x + y^2 = 5$.