

# Math 2210 - Assignment 8

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## 1 Sections 12.9 through 13.1

### 1.1 Section 12.9

12.9.1 Find the minimum of:

$$f(x, y) = x^2 + y^2$$

subject to the constraint:

$$g(x, y) = xy - 3 = 0$$

**12.9.4** Find the minimum of:

$$f(x, y) = x^2 + 4xy + y^2$$

subject to the constraint:

$$x - y - 6 = 0.$$

**12.9.6** Find the minimum of:

$$f(x, y, z) = 4x - 2y + 3z$$

subject to the constraint:

$$2x^2 + y^2 - 3z = 0.$$