# Unit 8: Applications of optimization

**Vocabulary and notation**

| marginal revenue | marginal cost | constraint |
| --- | --- | --- |
| centroid | moment | multiplicity of a root |

Note: a number of bold-faced words appear in 7.2 but these are NOT part of the mandatory vocabulary (e.g., Cobb-Douglas, production level, etc.).

**Skills**

No new skills are introduced in Unit 7. However, you should have gained some general facility figuring out how to set up optimization in geometric problems and economics and business applications. Also, by now you should be getting good at the following skills from Unit 6.

- Parametrizing the objective function by a single variable.

- Knowing the constraints on this variable (what is the interval of allowed values)

- Checking endpoints and points of non-differentiability