

**Lesson 20 - 3D Arc Length**

**Objectives**

- Develop the formula for computing the arc length of a space curve.
- Determine the arc length between two points on a space curve.

**READ**

- Review Stewart, Chapter 8.1, pages 525-530.
- Stewart, Chapter 13.3, pages 830-831 through example 2.

**THINK ABOUT**

- How are the derivatives of 2 dimensional vector functions different from the derivatives of 3 dimensional vector functions?
- How does a rate of change over a period of time become a distance?
- What types of things move along space curves?

**MATHEMATICA COMMANDS AND TASKS YOU NEED TO KNOW**

No new commands.