

**Planning a Triathlon**

Sophia is in charge of planning an annual triathlon in her city. The triathlon will consist of three distinct sections, as described below.

Section 1: A swim across a part of Sunset Lake.

Section 2: A bicycle ride through the New York City Park.

Section 3: A run through downtown that ends at City Hall.

The organizing committee for the triathlon asks Sophia to follow these criteria:

- Elite athletes should be able to finish in 2 hours
- The distance of the swim is  $\frac{1}{5}$  the distance of the run.
- The entire course covers a distance of 28 miles.

Sophia does some research on top triathlon finish times. She finds that, on average, elite athletes are able to swim at about 3 mi/h, bicycle at about 20 mi/h, and run at a speed of 10 mi/h. Sophia needs to determine a triathlon course based on these rates.

**Task Description**

Plan the triathlon by determining the distance for each part of the course.