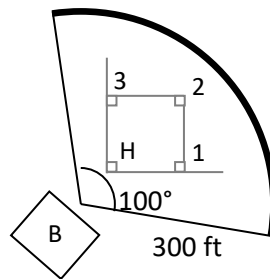


Arcs & Sectors

Complete the following exercises without using a calculator.

1. A water sprinkler sprays water up to 30 feet while rotating through an angle of 100° . What area of the lawn receives water?
2. Candace wants to put a new flower bed in the corner of her back yard, which forms a 70° angle. She needs to purchase some edging to line the flower bed. The edging should lie along a circular arc of radius 12 feet. How much edging will she need, rounded to two decimals using appropriate units?
3. Ralph is constructing a baseball field and wants the backstop behind home plate to have a measurement of 100° . The outfield fence should fit along a circular path centered at the backstop at a distance of 300 feet, as illustrated below.



- a) What length of fence will be required in the outfield (bold curve)?
- b) What is the area of the enclosed field?