

## 4-7 The Law of Sines and the Law of Cosines

Use Heron's Formula to find the area of each triangle. Round to the nearest tenth.

37.  $x = 9$  cm,  $y = 11$  cm,  $z = 16$  cm

39.  $x = 58$  ft,  $y = 40$  ft,  $z = 63$  ft

41.  $x = 8$  yd,  $y = 15$  yd,  $z = 8$  yd

43. **LANDSCAPING** The Steele family want to expand their backyard by purchasing a vacant lot adjacent to their property. To get a rough measurement of the area of the lot, Mr. Steele counted the steps needed to walk around the border and diagonal of the lot.



a. Estimate the area of the lot in steps.

b. Mr. Steele measured his step to be 1.8 feet. Determine the area of the lot in square feet.

Find the area of each triangle to the nearest tenth.

45.  $\triangle ABC$ , if  $A = 98^\circ$ ,  $b = 13$  mm, and  $c = 8$  mm

47.  $\triangle RST$ , if  $R = 35^\circ$ ,  $s = 42$  ft, and  $t = 26$  ft

49.  $\triangle FGH$ , if  $F = 41^\circ$ ,  $g = 22$  in., and  $h = 36$  in.