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

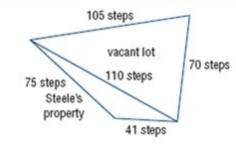
Use Heron's Formula to find the area of each triangle. Round to the nearest tenth.

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.