

**Homework 7.1**  
**The Law of Sines**

PROBLEM 1. Solve the triangle, if possible:  $B = 36^\circ$ ,  $C = 23^\circ$ ,  $b = 24$ .

PROBLEM 2. Solve the triangle, if possible:  $A = 37.8^\circ$ ,  $a = 24$ ,  $b = 31$ .

PROBLEM 3. Solve the triangle, if possible:  $c = 4$  mi,  $B = 36.09^\circ$ ,  $C = 30.37^\circ$ .

PROBLEM 4. Solve the triangle, if possible:  $b = 61.04$  yd,  $c = 61.04$  yd,  $C = 79.51^\circ$ .

PROBLEM 5. Solve the triangle, if possible:  $A = 77.3^\circ$ ,  $a = 10.5$ ,  $b = 9.4$ .

PROBLEM 6. Solve the triangle, if possible:  $A = 94^\circ$ ,  $a = 15.8$  in,  $b = 16.7$  in.

PROBLEM 7. Solve the triangle, if possible:  $a = 200$  m,  $A = 30.46^\circ$ ,  $C = 29.51^\circ$ .

PROBLEM 8. Find the area of the triangle:  $B = 34^\circ$ ,  $a = 9.6$  ft,  $c = 2.6$  ft.

PROBLEM 9. Find the area of the triangle:  $C = 81^\circ 32'$ ,  $a = 5$  m,  $b = 7$  m.

PROBLEM 10. A pole leans away from the sun at an angle of  $9^\circ$  to the vertical. When the angle of elevation of the sun is  $58^\circ$ , the pole casts a shadow 44 ft long on level ground. How long is the pole?

