

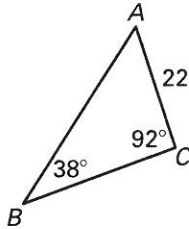
**LESSON**  
**13.5**

**Practice C**

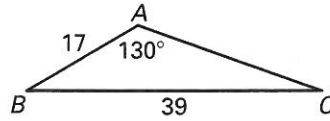
For use with pages 881–888

**Solve  $\triangle ABC$ .**

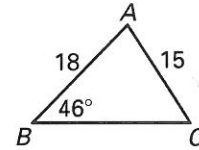
1.



2.



3.



**Solve  $\triangle ABC$ . (Hint: Some of the “triangles” may have no solution and some may have two solutions.)**

4.  $A = 62^\circ, B = 57^\circ, c = 25$

5.  $A = 15^\circ, C = 24^\circ, c = 8$

6.  $A = 120^\circ, a = 16, b = 9$

7.  $C = 75^\circ, a = 11, c = 9$

8.  $B = 45^\circ, b = 24, c = 19$

9.  $B = 32^\circ, a = 28, b = 18$

**Find the area of  $\triangle ABC$ .**

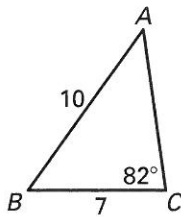
10.  $A = 29^\circ, b = 13, c = 7$

11.  $B = 55^\circ, b = 14, c = 10$

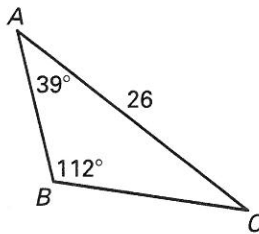
12.  $A = 79^\circ, a = 17, b = 17$

13.  $C = 66^\circ, a = 6, c = 27$

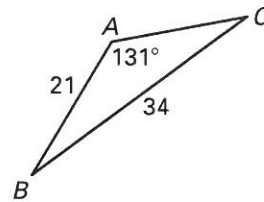
14.



15.

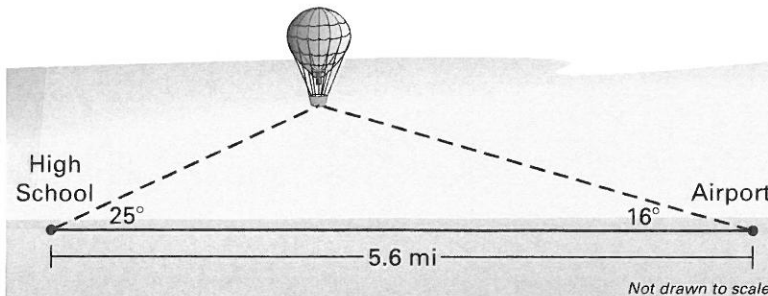


16.



**17. Real Estate** You want to buy a triangular plot of land. One side of the plot is 425 yards and another side is 210 yards. The angle opposite the 425 yard side is  $125^\circ$ . The price of the land is \$3300 per acre (1 acre = 4840 square yards). How much does the land cost?

**18. Hot Air Balloon** A hot air balloon is floating between the high school and the airport which are 5.6 miles apart. The angle of elevation from the high school is  $25^\circ$  and the angle of elevation from the airport is  $16^\circ$ . Approximate the height of the balloon above the ground.



**Practice Level C**

1.  $A = 50^\circ, a \approx 27.4, c \approx 35.7$  2.  $B \approx 30.5^\circ, C \approx 19.5^\circ, b = 25.8$  3.  $A \approx 74.3^\circ, C \approx 59.7^\circ, a \approx 20.1$  4.  $C = 61^\circ, a \approx 25.2, b \approx 24.0$

5.  $B = 141^\circ, a \approx 5.1, b \approx 12.4$  6.  $B \approx 29.2^\circ, C \approx 30.8^\circ, c \approx 9.5$  7. no triangle 8.  $A \approx 101^\circ, C \approx 34^\circ, a \approx 33.3$  9.  $A \approx 55.5^\circ, C \approx 92.5^\circ, c \approx 33.9$ ; or  $A \approx 124.5^\circ, C \approx 23.5^\circ, c \approx 13.5$

- 10. 22.1 square units
- 11. 70.0 square units
- 12. 54.1 square units
- 13. 79.1 square units
- 14. 28.4 square units
- 15. 111.2 square units
- 16. 129.1 square units
- 17. about \$15,716.11
- 18. about 0.99 mi