

DO THESE PROBLEMS ON SEPARATE PAPER.

- a. For each of the following, identify how many solutions exist.
b. Solve each triangle below. If there is no solution, write “no solution”. If there is more than one solution, find all solutions. Round each angle to the nearest degree and each side to the nearest tenth. Be sure to find all missing parts.

1. $A = 126.5^\circ$, $a = 25.5$ cm, $b = 51.9$ cm

2. $A = 41^\circ$, $a = 34$ ft., $b = 48$ ft.

3. $A = 62.7^\circ$, $a = 6.8$ inches, $b = 3.49$ inches

4. $A = 45.5^\circ$, $C = 110.5^\circ$, $a = 338$ ft.

5. $b = 63.6$ km, $c = 75.7$ km, $A = 122.7^\circ$

6. $B = 15.4^\circ$, $C = 24.8^\circ$, $a = 305$ cm

7. $a = 46$ yd., $b = 73$ yd., $c = 58$ yd.

For each of the following triangles ABC, find the triangles area given:

8. $A = 57^\circ$, $b = 15$ ft., $c = 23$ ft.

9. $B = 58^\circ$, $C = 33^\circ$, $a = 7.9$ m.

10. $B = 16.3^\circ$, $C = 73.7^\circ$, $b = 2.75$ inches

11. $a = 8.35$ cm, $b = 6.29$ cm, $c = 3.36$ cm.

12. $A=110.4^\circ$, $C=21.8^\circ$, and $c = 240$ m

13. Two adjacent sides of a triangle have lengths 5cm and 8cm. If these sides form a 35° angle, what is the area of the triangle?

14. $a = 63$ ft., $b = 37$ ft., and $c= 30$ ft.