Pre Calculus LSC #3

Find the number of solutions for the given data. DO NOT SOLVE.

1.
$$A = 42^{\circ}$$
, $a = 5$, $b = 10$

3.
$$A = 42^{\circ}$$
, $a = 5$, $b = 4$

5.
$$A = 73^{\circ}$$
. $a = 8$. $b = 8$

7.
$$A = 93^{\circ}$$
. $a = 4$. $b = 8$

9.
$$A = 173^{\circ}$$
, $a = 9$, $b = 9.1$

11.
$$a = 2$$
, $a = 3$, $b = 6$

13.
$$B = 71^{\circ}$$
, $a = 5$, $c = 275$

15.
$$A = 41^{\circ}$$
, $B = 196^{\circ}$, $a = 10$

17.
$$A = 60^{\circ}, b = 2, a = \sqrt{3}$$

19.
$$B = 140^{\circ}$$
, $a = 3$, $b = 2$

21.
$$A = 105^{\circ}$$
, $b = 13$, $C = 80^{\circ}$

23.
$$a = 12$$
, $c = 19$, $B = 71^{\circ}$

25.
$$A = 50^{\circ}$$
, $a = 4$, $b = 10$

27.
$$A = 55^{\circ}$$
. $B = 21^{\circ}$. $c = 1$

2.
$$A = 42^{\circ}$$
. $a = 5$. $b = 7$

4.
$$A = 73^{\circ}$$
, $a = 8$, $b = 9$

6.
$$A = 73^{\circ}$$
. $a = 8$. $b = 3$

8.
$$A = 93^{\circ}$$
. $a = 4$. $b = 2$

10.
$$A = 173^{\circ}$$
, $a = 9$, $b = 8.9$

12.
$$C = 17^{\circ}$$
, $a = 10$, $b = 11$

14.
$$A = 20^{\circ}$$
, $a = 7$, $b = 29$

16.
$$C = 20^{\circ}$$
, $b = 10$, $c = 4$

18.
$$A = 90^{\circ}$$
, $a = 20$, $b = 19$

20.
$$C = 120^{\circ}$$
, $b = 14$, $c = 13$

22.
$$a = 12$$
, $b = 6$, $c = 4$

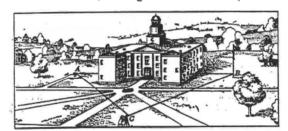
24.
$$A = 27^{\circ}$$
, $a = 6$, $b = 9$

26.
$$a = 17$$
, $b = 12$, $c = 26$

28.
$$A = 30^{\circ}$$
, $a = 4$, $b = 8$

Solve the following word problems.

29. Two points, A and B, are on opposite sides of a building. A point C is chosen such that AC = 182.96 feet, BC = 165.72 feet, and angle $ACB = 84^{\circ}36.4^{\circ}$ (see sketch below). Find the distance AB.



30. The direction of the line from A to B is known, but a building between these two points prevents the direct measurement of the entire line. A point C is chosen on AB on the same side of the building as A, and a point D is determined such that angle ACD = 132°26.8' and CD = 153.79 feet. An angle of 96°48.7' is laid off at D, one side along CD and the other side intersection AB at E, on the opposite side of the building from C. Find the distance CE, the distance DE, and the angle DEB.