MATH 122
NUMBER OF SOLUTIONS FOR A TRIANGLE

In each of the following, indicate the number of triangles that can be constructed with the given sides and angles.

				Number of triangles		
				0	**1**	**2**
1.	$\alpha = 45°$	$b = 6$	$c = 5$			
2.	$\alpha = 19°$	$\beta = 47°$	$c = 10$			
3.	$\alpha = 76°$	$\beta = 42°$	$b = 6$			
4.	$\alpha = 119°$	$\beta = 71°$	$b = 6$			
5.	$a = 2$	$b = 2$	$c = 4$			
6.	$a = 2$	$b = 2$	$c = 3$			
7.	$a = 10$	$b = 6$	$c = 12$			
8	$\alpha = 45°$	$b = 10$	$a = 8$			
9.	$\gamma = 45°$	$c = 5\sqrt{2}$	$a = 10$			
10.	$\beta = 45°$	$c = 10$	$b = 10$			
11.	$\beta = 45°$	$b = 12$	$c = 10$			
12.	$\beta = 45°$	$b = 4$	$c = 10$			
13.	$\gamma = 130°$	$c = 10$	$b = 5$			
14.	$\gamma = 130°$	$c = 10$	$a = 6$			
15.	$\gamma = 130°$	$c = 5$	$a = 6$			
16.	$\gamma = 130°$	$c = 5$	$a = 5$			
17.	$\alpha = 60°$	$b = 14$	$a = 7\sqrt{3}$			
18.	$\alpha = 60°$	$b = 14$	$a = 8\sqrt{3}$			
19.	$\alpha = 60°$	$b = 14$	$a = 6\sqrt{3}$			
20.	$\alpha = 60°$	$b = 14$	$a = 9\sqrt{3}$			

21. How many triangles can be constructed with the following angles:

$\alpha = 100°$ $\beta = 30.5°$ $\gamma = 50.5°$?

22. How many triangles can be constructed with the following angles:

$\alpha = 70.3°$ $\beta = 43.5°$ $\gamma = 66.2°$?