Triangle Discovery *Answer Key*

For each problem, arrange three squares of the given side lengths to form a triangle. Complete the tables to compare the areas. Then determine the type of triangle (acute, right, or obtuse).

Lengths of Sides		
a	b	c
3	4	5
$a^2 + b^2$		c^2
25		25
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **=** c^2 Type of triangle: **right**		

Lengths of Sides		
a	b	c
5	7	9
$a^2 + b^2$		c^2
74		81
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **<** c^2 Type of triangle: **obtuse**		

Lengths of Sides		
a	b	c
6	8	10
$a^2 + b^2$		c^2
100		100
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **=** c^2 Type of triangle: **right**		

Lengths of Sides		
a	b	c
5	8	10
$a^2 + b^2$		c^2
89		100
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **<** c^2 Type of triangle: **obtuse**		

Lengths of Sides		
a	b	c
3	5	7
$a^2 + b^2$		c^2
34		49
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **<** c^2 Type of triangle: **obtuse**		

Lengths of Sides		
a	b	c
5	12	13
$a^2 + b^2$		c^2
169		169
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **=** c^2 Type of triangle: **right**		

Lengths of Sides		
a	b	c
7	9	10
$a^2 + b^2$		c^2
130		100
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **>** c^2 Type of triangle: **acute**		

Lengths of Sides		
a	b	c
4	5	6
$a^2 + b^2$		c^2
41		36
Compare $a^2 + b^2$ and c^2 using >, <, or =. $a^2 + b^2$ **>** c^2 Type of triangle: **acute**		