How Many Triangles: Side-Side-Angle

# Acute Angle

Go to [geogebra.org/m/rsw7dspt](https://www.geogebra.org/m/rsw7dspt), and use the GeoGebra
applet to complete the table below. With each given side
length, how many triangles can you create? As you complete the table, look for a pattern.

## Observations

| 1st SideLength | Number ofTriangles |  | Compare the Side Lengths |
| --- | --- | --- | --- |
| 1st SideLength | < , = , > | 2nd SideLength |
| 3 |  |  | 3 |  | 8 |
| 4 |  |  | 4 |  | 8 |
| 5 |  |  | 5 |  | 8 |
| 6 |  |  | 6 |  | 8 |
| 7 |  |  | 7 |  | 8 |
| 8 |  |  | 8 |  | 8 |
| 9 |  |  | 9 |  | 8 |
| 10 |  |  | 10 |  | 8 |
| 11 |  |  | 11 |  | 8 |
| 12 |  |  | 12 |  | 8 |

## Summarize

Generalize what you observed. Write any patterns that you noticed.



# Right or Obtuse Angle

Use the GeoGebra applet to complete the table below.
With each given side length, how many triangles can
you create? As you complete the table, look for a pattern.

## Observations

| 2nd SideLength | Number ofTriangles |  | Compare the Side Lengths |
| --- | --- | --- | --- |
| 2nd SideLength | < , = , > | 1st SideLength |
| 3 |  |  | 3 |  | 8 |
| 4 |  |  | 4 |  | 8 |
| 5 |  |  | 5 |  | 8 |
| 6 |  |  | 6 |  | 8 |
| 7 |  |  | 7 |  | 8 |
| 8 |  |  | 8 |  | 8 |
| 9 |  |  | 9 |  | 8 |
| 10 |  |  | 10 |  | 8 |
| 11 |  |  | 11 |  | 8 |
| 12 |  |  | 12 |  | 8 |

## Summarize

Generalize what you observed. Write any patterns that you noticed.