How Many Triangles: Side-Side-Angle

# Acute Angle

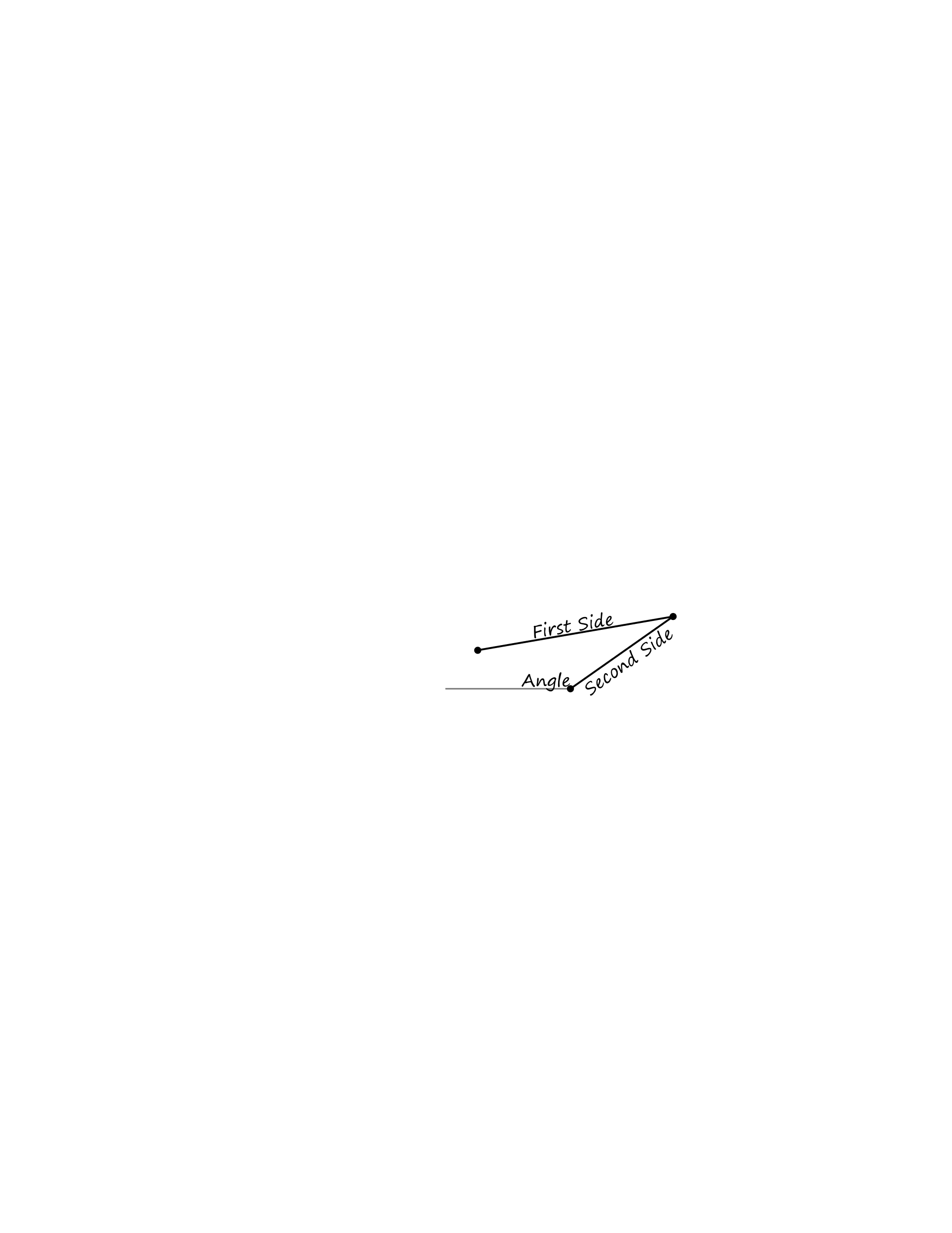
Go to [geogebra.org/m/rsw7dspt](https://www.geogebra.org/m/rsw7dspt), and use the GeoGebra   
applet to complete the table below. With each given side   
length, how many triangles can you create? As you complete the table, look for a pattern.

## Observations

| 1st Side  Length | Number of  Triangles |  | Compare the Side Lengths | | |
| --- | --- | --- | --- | --- | --- |
| 1st Side  Length | < , = , > | 2nd Side  Length |
| 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 Side  Length | Number of  Triangles |  | Compare the Side Lengths | | |
| --- | --- | --- | --- | --- | --- |
| 2nd Side  Length | < , = , > | 1st Side  Length |
| 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.