**Triangle Sum Theorem**

**Materials Needed*: One Triangle Per Person, One Piece of Binder Paper Per Person, Pencil, Scissors***

**Part 1:** **Triangle Sum By Trial (10 minutes)**

1. Each person in the team should cut out 1 triangle (one person has A, one has B, …)
2. Tear off the **3** angles of your triangle (the corners – one person has 3 A pieces, 3 B pieces, …)
3. Draw a horizontal line on the top of your ***binder paper***, with a dot in the center like this:
4. Fit the three angles, side by side, on the top of the line with all three arrows pointing at the dot.
5. Compare your picture with your partner. What did you discover about the angles in each of your triangles? Finish the sentence in your notes:

“From this activity, we think the angles in any triangle\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.”

1. **Check in with the teacher!** Be ready to explain

 what you noticed about the angles in a triangle.

**Part 2: Using The Relationship! (15 minutes)**

Find x in each diagram below. **Show all of your math work step-by-step on your binder paper!**

* 1. b.

2x°

96°

x+12°

80°

40°

 x°

c. Find the number of degrees in the “ ? ” mark. Remember what we learned about supplementary and vertical angles! Then, write an explanation about how you found it – peanut butter and jelly style. Make sure to include a “because” in each sentence.

35°°

°

100°

?

**Part 3: Lots of Angle Chasing! (15 Minutes)**

For each problem below, find the measure of the missing angle. Write what you figured out step by step.

|  |  |
| --- | --- |
| I know that… | Because… |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

**

1.

**2.

|  |  |
| --- | --- |
| Statements | Reasons |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |



B

A



D

C