**Activity 1.5.3b Composition –Two Rotations**

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| **Construction Steps**  In this activity you will construct a triangle and draw the image under a counterclockwise rotation by carrying out the steps that follow for **Drawing a Rotation Image**.    **Step 1**  Construct and Point P (center of rotation) on a sheet. | |
| **Step 2**  Draw a segment connecting vertex *A* and the center of rotation point *P*. | **Step 3**  Use a protractor to measure a 120° angle counterclockwise and draw a ray. |
| **Step 4**  Place the point of the compass at *P* and draw an arc from | **Step 5**  Repeat Steps 1–3 for each vertex. Connect the vertices to form the image. |

**Exploration Steps and Comprehension Questions**

1. **Choose two positive integers whose sum is 120**.

Record your integer values:

Draw all of the rotation images that result from the steps below on the same sheet of paper you used to complete the **Construction Steps.** Use the steps outlined on the previous page for **Drawing a Rotation Image** to complete **step b and c**.

1. Rotate counterclockwise around *P* by an angle measure equal to . **Draw the image that results**.
2. Rotate **the figure that resulted from step b** counterclockwise around *P* by an angle measure equal to . **Draw the image that results**.
3. **Comment on any relationship you observe between the two smaller rotations and the larger rotation.**

**e. Compare your results with those of your fellow students who may have chosen different values for *n*1 and *n*2.**