**Activity 3.7.3 Tessellating Triangles**

Show that any triangle may tile the plane.

1. Pick three points and create ∆*ABC*.
2. Find the midpoint of side $\overbar{BC}$.
(You may use Geogebra’s shortcut with the midpoint or center tool.)
3. Rotate ∆*ABC* by 180° around the midpoint.
4. The two triangles now form what special quadrilateral? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Translate the two triangles with the vector from *A* to *B*.
6. Translate the same two triangles with the vector from *A* to *C*.
7. Keep translating until you have at least 12 copies of the original triangle.
8. Will you be able to continue filling the plane with copies of the triangle? Explain your reasoning.
9. How many triangles are there at each vertex?
10. What is the sum of the angles at each vertex?
11. Now change the shape of ∆*ABC* and observe what happens.
12. Which types of triangles will tile the plane?
a. acute triangles
b. right triangles
c. obtuse triangles
d. all of the above

Chose a, b, c, or d and explain your choice.