Problem 1 – Interior angles of a triangle

1. Record the measures of the interior angles of your triangle.

∠ABC	∠BCA	∠CAB

2. What is the sum of the measures of the three interior angles of the triangle?

3. Does this result change when a vertex of the triangle is dragged?

Problem 2 – One exterior angle of a triangle

4. Record the measures of the interior angles and exterior angle ∠BCD of your triangle.

∠ABC	∠BCA	∠CAB	∠BCD

5. Make some observations about the exterior angle ∠BCD and its relationship to other angles in the chart.

Problem 3 – Three exterior angles of a triangle

6. List the measures of the exterior angles of your triangle (one at each vertex).

Ext ∠ at vertex *A*	Ext ∠ at vertex *B*	Ext ∠ at vertex *C*

7. Calculate the sum of the three exterior angles.

8. Why do you think it is important to use one exterior angle at each vertex?