**Recognizing Linear Functions from Geometric Applications**

The sum of the interior angles of a convex polygon is a function of the number of sides in the polygon. The sum of interior angles, *f*(*x*), can be modeled by, where *x* is the number of sides in the polygon.



1. Fill in the table.



1. What is a reasonable domain of this situation?
2. What is a reasonable range of this situation?
3. Label your axes. Plot the points (DO NOT CONNECT THE POINTS).
4. Explain why you shouldn’t connect the points.
5. Explain what the number in the shaded box mean in the context of the problem.
6. What is the rate of change of this function?

In a right triangle, the measure of one acute angle is a function of the measure of the other acute angle. The measure of one acute angle, *f*(*x*), can be modeled by, where *x* is the measure of the other acute angle.

1. Fill in the table. Pick your own values for *x*.



1. What is a reasonable domain of this situation?
2. What is a reasonable range of this situation?
3. Label your axes. Plot the points.
4. Should you connect the points? Explain why or why not?
5. Explain what the numbers in the shaded box mean in the context of the problem.
6. What is the rate of change of this function?