We have already discovered that the sum of all exterior angles of a polygon is always 360°.

1. Use the "car" applet to justify it. APPLET
2. In the "car" applet, create a concave polygon. Is the sum of exterior angles still 360°? If you think it is not, can we add some considerations to make it work?

The sum of interior angles of a polygon. There are several ways to come up with a formula. Here are three methods. Try to derive the formula by at least two different methods (preferably by all three methods).

Method 1: Consider how interior and exterior angles are related and use what we know about the sum of all exterior angles.

Method 2. Use polygon's vertices to split it into triangles and use what you know about the sum of interior angles of a triangle.

Method 3. Split a polygon into triangles by using an arbitrary point in the polygon's interior (see the picture).
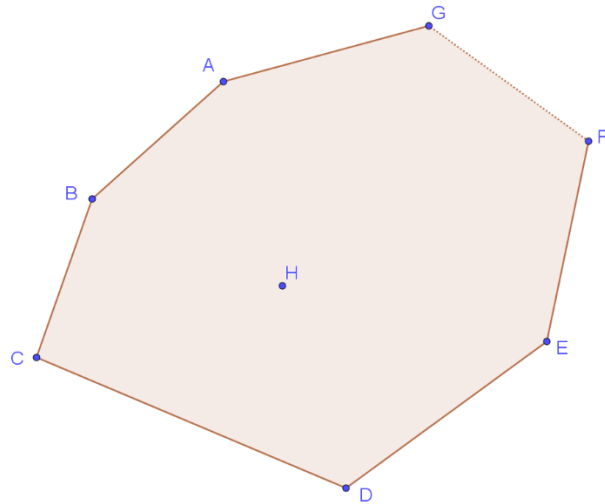
Bring your answers (and questions!) for Tuesday.