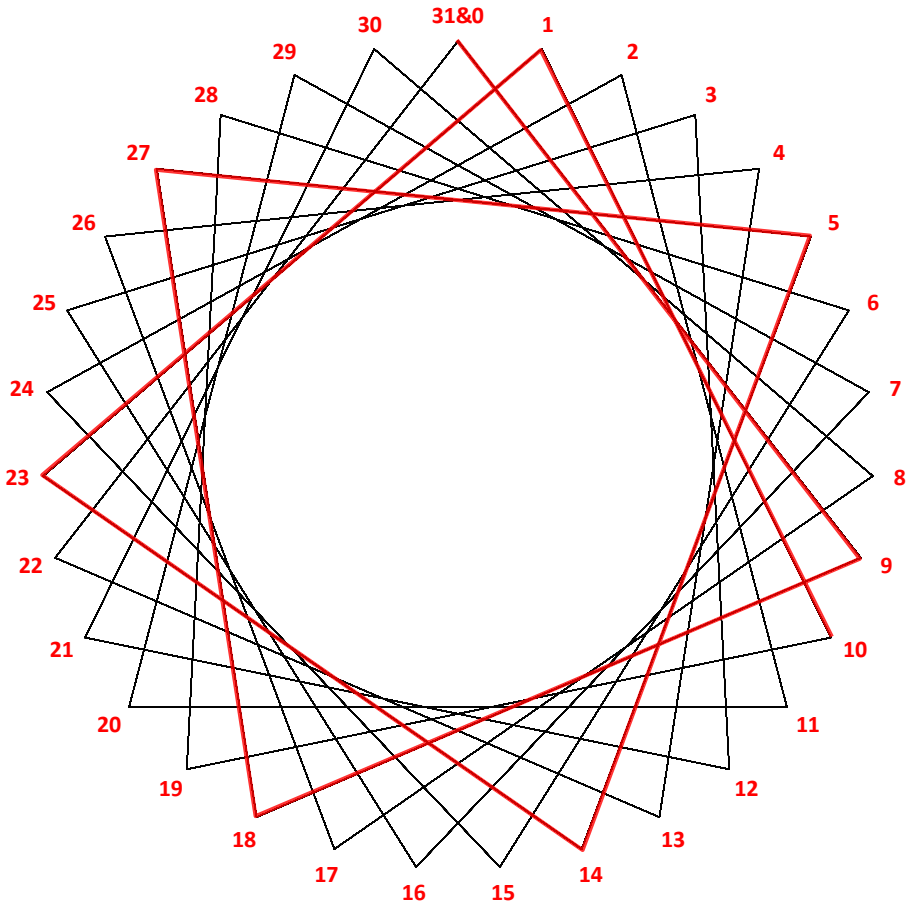
Angle identification Challenge Questions



FACT. The first 8 lines are shown in **red**. Question 1 uses the *Calculating Triangle Angles using Vertices* explainer.

1. Consider the triangle bounded by the following three lines: **1-10**, **5-14** and **9-18**.
    a. One of the triangle's angles appears that it may be a right angle. Is it a right angle? Briefly explain. Is it isosceles?
    b. Provide values for each of the angles in degrees in either decimal or fractional form.
2. Would it be possible to use an alternative 3rd line to **9-18** and create an isosceles triangle with lines **1-10** and **5-14** creating the vertex angle (the vertex angle is opposite the base and is created by having line segments the same size as legs)?
    a. In particular, what angles are created from lines **1-10** and **5-14**?
    b. If it is possible, what is the line that provides the base of the triangle and what are the vertex and base angles?