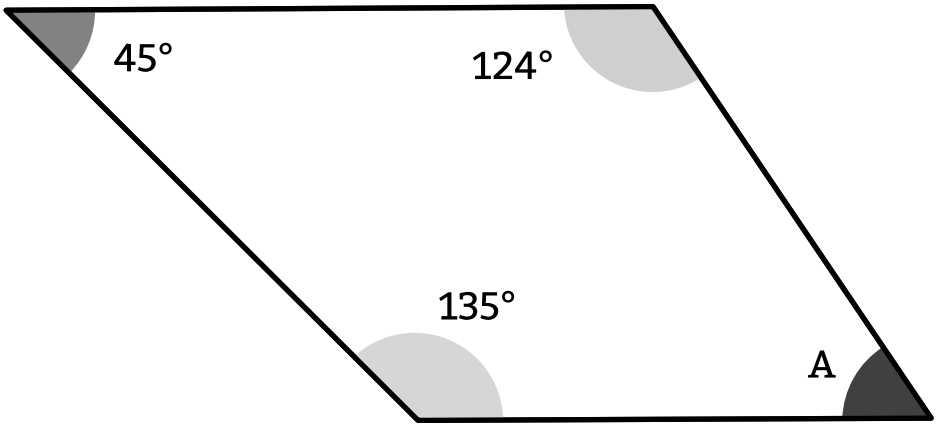
Exploring Polygons and Angles

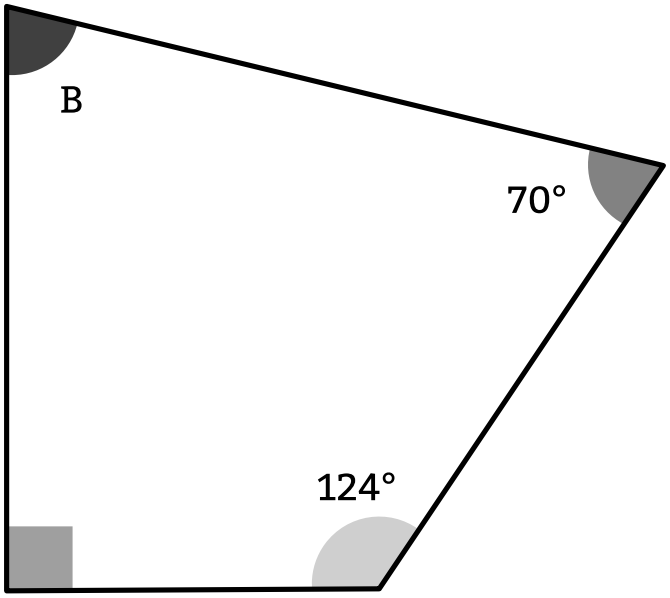
Determine the unknown angles in the following polygons:

1. A quadrilateral with three identified angles: 124°, 45°, and 135°. Solve for Angle A.



Angle A =

2. A right-angled quadrilateral with two labeled angles: 70° and 124°. There is a right-angled symbol in one corner of the quadrilateral. Solve for Angle B.



Angle B =

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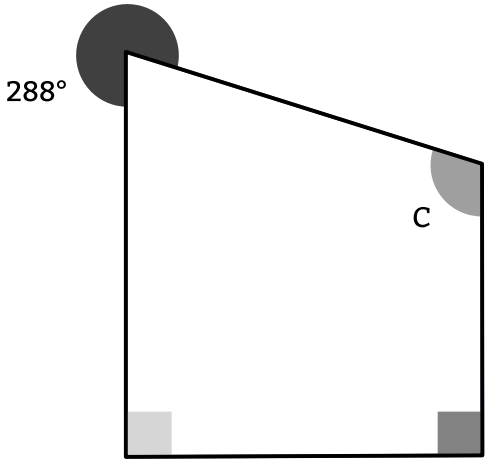
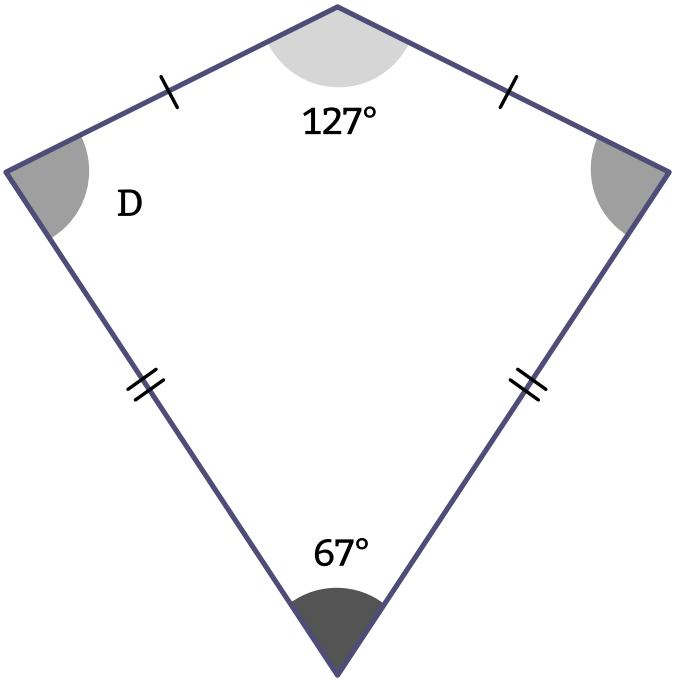
3. A quadrilateral with two right angles and one reflex angle of 288° . Solve for Angle C.



Angle C =

4. A kite-like quadrilateral that has two sides that are equal and another two sides that are equal. Two angles are labelled as 127° and 67°. There are two unknown angles opposite to each other. Solve for Angle D.



Angle D =

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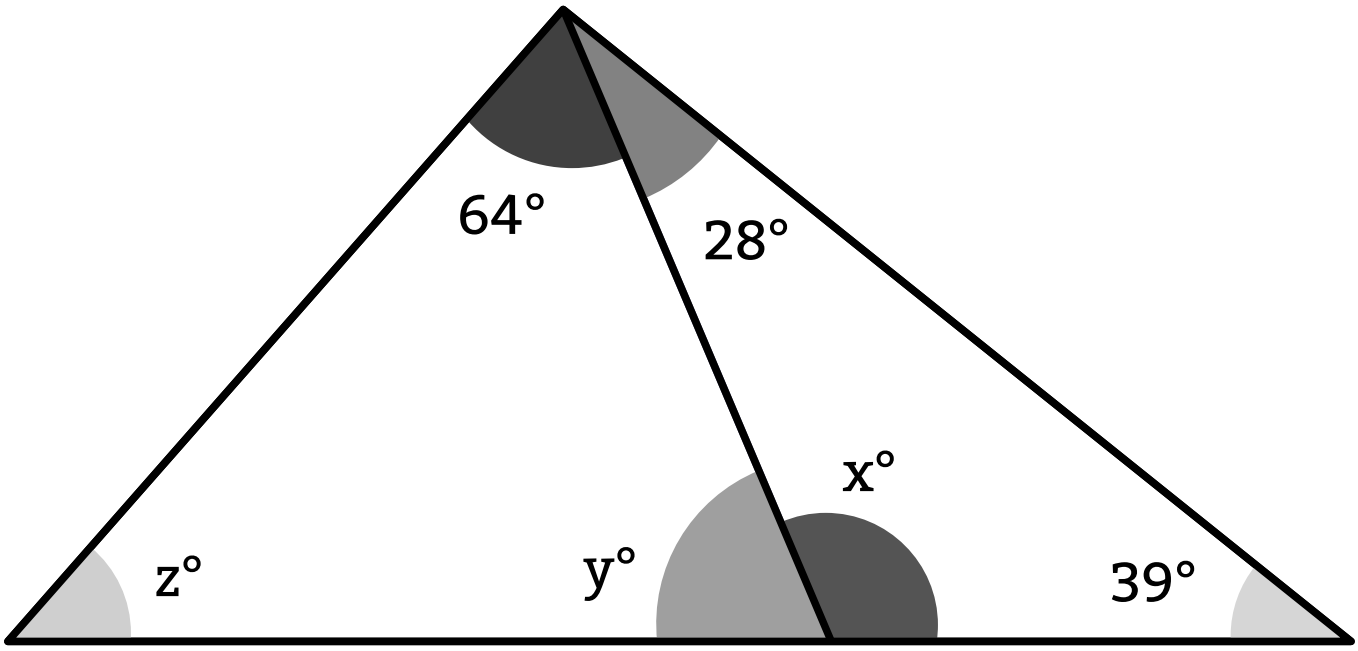
5. Two triangles connected together at a vertex. The first triangle has angles: 28°, 39° and unknown Angle X. The second triangle has angles: 64°, and unknown Angle Y and Z. Angle X is supplementary to Angle Y. Solve for Angle X, Y, and Z.



Angle X =

Angle Y =

Angle Z =

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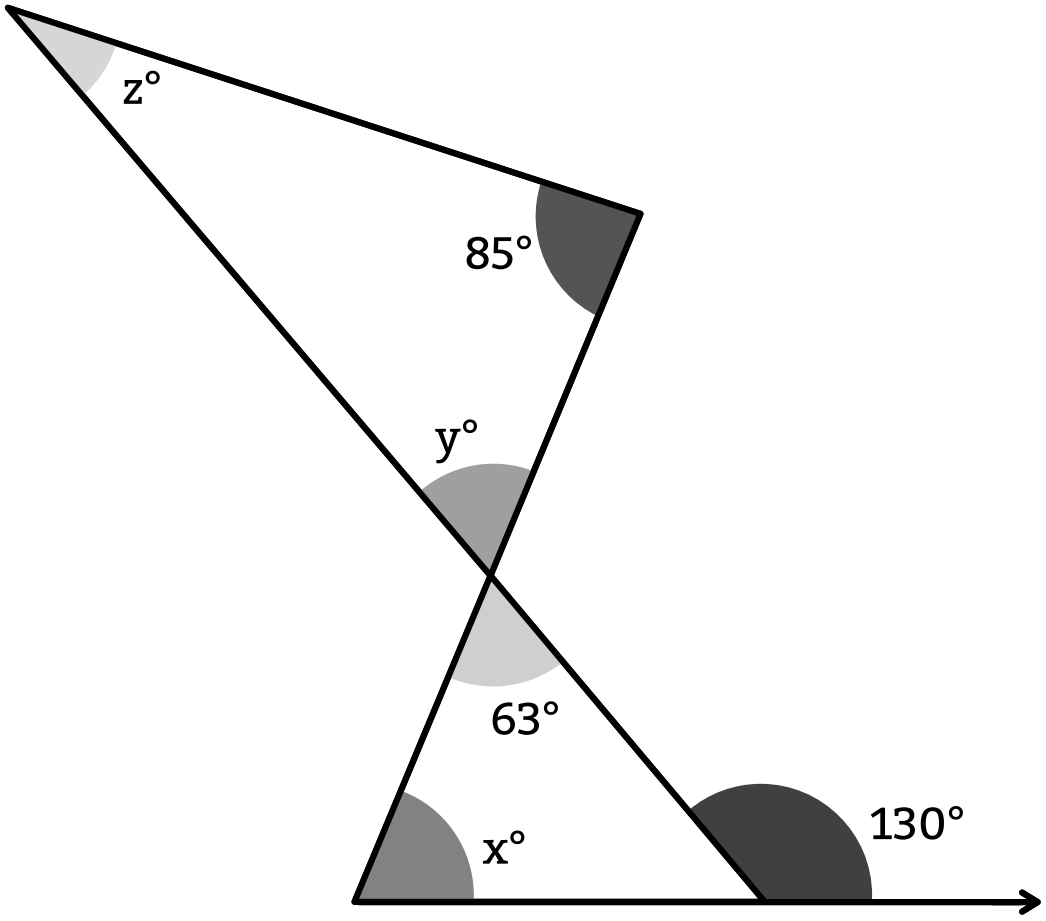
6. Two triangles are stacked on top of each other and connected at a vertex to form an "X" like shape. The bottom triangle has angles: 63°, unknown Angle X, and another unknown angle which is supplementary to a 130° angle outside of the triangle. The triangle stacked on top is connected at the vertex of the 63° angle to an unknown Angle Y in the top triangle. This second triangle has angles: 85 °, and unknown Angle Y and Z. Solve for Angle X, Y, and Z.



Angle X =

Angle Y =

Angle Z =