

If the measure of an interior angle is 35 degrees, what is the measure of the corresponding exterior?

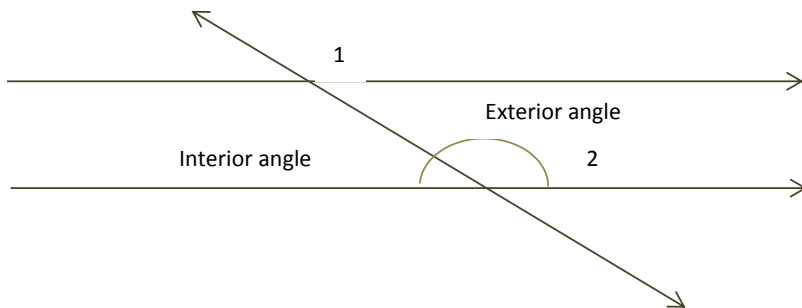
**Solution:**

Corresponding angles are formed when a line intersects two parallel lines.

Parallel lines are lines on the same plane that never intersect when they are extended infinitely in both directions.



The graph below shows what happens when a line intersects two parallel lines. Corresponding angles are created, and, in this case, angle 1 and angle 2 are corresponding angles. They share the same exact degree measurement.



We determine the measure of the exterior angles that correspond with the interior angle. The exterior and interior angles form a straight line. Since the interior and exterior angle at the same vertex of the polygon are supplementary, we can equate their sum to  $180^\circ$ .

$$\text{Interior angle} + \text{Exterior angle} = 180^\circ$$

In our case  $\text{Exterior angle} = 180^\circ - 35^\circ = 145^\circ$