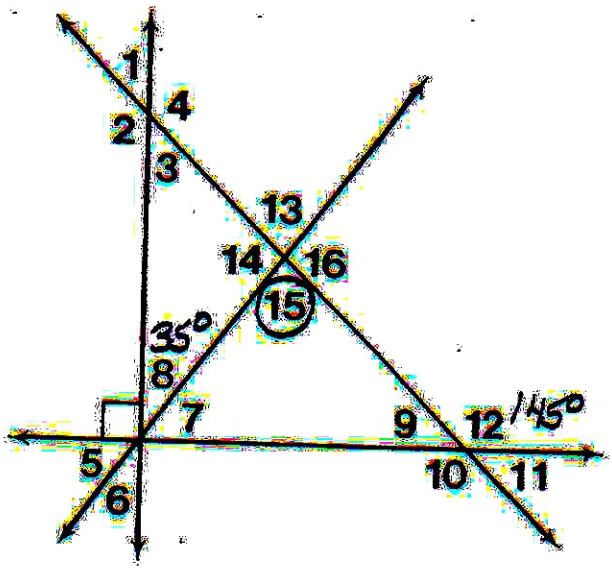
Sample Problem

If the $m\angle 8 = 35°$ and the $m\angle 12 = 145°$, THEN $m\angle 15 =$ _____



STEPS	REASONS
$m\angle 8 = 35°$ $m\angle 12 = 145°$	Given
$m\angle 7 + m\angle 8 = 90$ $m\angle 7 + 35 = 90$ $m\angle 7 = 55°$	$\angle 7 + \angle 8$ are complementary Substitution solve equation
$m\angle 9 + m\angle 12 = 180$ $m\angle 9 + 145 = 180$ $m\angle 9 = 35°$	$\angle 9$ and $\angle 12$ supplementary substitution solve equation
$m\angle 7 + m\angle 15 + m\angle 9 = 180$ $55 + m\angle 15 + 35 = 180$ $m\angle 15 + 90 = 180$ $m\angle 15 = 90$	Sum of angles in a $\Delta = 180°$ Substitution solve equation