

3. 122°

4. 136°

5. 108°

36°

6. 108°

106°

7. 105°

82°

8. 120°

38°

9. The sum of the interior angle measures of the quadrilateral is 358° . It should be 360° .

12. $a = 116^\circ, b = 64^\circ, c = 90^\circ, d = 82^\circ, e = 99^\circ, f = 88^\circ, g = 150^\circ, h = 56^\circ, j = 106^\circ, k = 74^\circ, m = 136^\circ, n = 118^\circ, p = 99^\circ$; Possible explanation: The sum of the angles of a quadrilateral is 360° , so $a + b + 98^\circ + d = 360^\circ$. Substituting 116° for a and 64° for b gives $d = 82^\circ$. Using the larger quadrilateral, $e + p + 64^\circ + 98^\circ = 360^\circ$. Substituting e for p , the equation simplifies to $2e = 198^\circ$, so $e = 99^\circ$. The sum of the angles of a pentagon is 540° , so $e + p + f + 138^\circ + 116^\circ = 540^\circ$. Substituting 99° for e and p gives $f = 88^\circ$.

5.2 Investigation on Sketchpad

Exterior Angle Sum Conjecture: for any polygon, the sum of the measures of a set of exterior angles is 360. 

Equiangular Polygon Conjecture: you can find the measure of each interior angle of an equiangular n -gon by using either of these formulas: $180 - (360/n)$ or $[180(n-2)]/n$.



