Parallel Lines and Angle Sums - Worksheet

Name ______________________

1. \( \angle 2 \cong \angle 7 \) because these angles are _______________ angles.
2. \( \angle 3 \cong \angle 6 \) because these angles are _______________ angles.
3. Name all pairs of alternate interior angles: _________ and _________.
4. Name all pairs of corresponding angles: _________, _________, _________, and _________.
5. Name all pairs of alternate exterior angles: _________ and _________.
6. Name all pairs of consecutive interior angles: _________ and _________.
7. Line m is called a _________________.
8. Parallel lines never ________________.
9. \( m\angle 2 + m\angle 8 = \) ___°
10. \( m\angle 5 + m\angle 3 = \) ___°
11. \( \angle 1 \cong \angle 4 \) because they are _______________ angles.

12. Given \( m\angle 1 = 115^\circ \)
   \[ m\angle 2 = \] \( m\angle 6 = \)
   \[ m\angle 3 = \] \( m\angle 7 = \)
   \[ m\angle 4 = \] \( m\angle 8 = \)
   \[ m\angle 5 = \]

13. Given: \( m\angle 2 = x + 15^\circ \), \( m\angle 8 = 2x \)
   \[ m\angle 1 = \] \( m\angle 5 = \)
   \[ m\angle 2 = \] \( m\angle 6 = \)
   \[ m\angle 3 = \] \( m\angle 7 = \)
   \[ m\angle 4 = \] \( m\angle 8 = \)