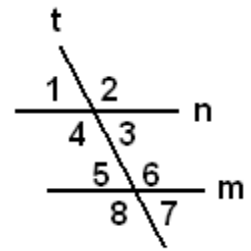


Parallel Lines and Transversals

► **Converse of Corresponding Angles Postulate (new postulate):**

If a transversal cuts two parallel lines,
then the corresponding angle pairs are _____

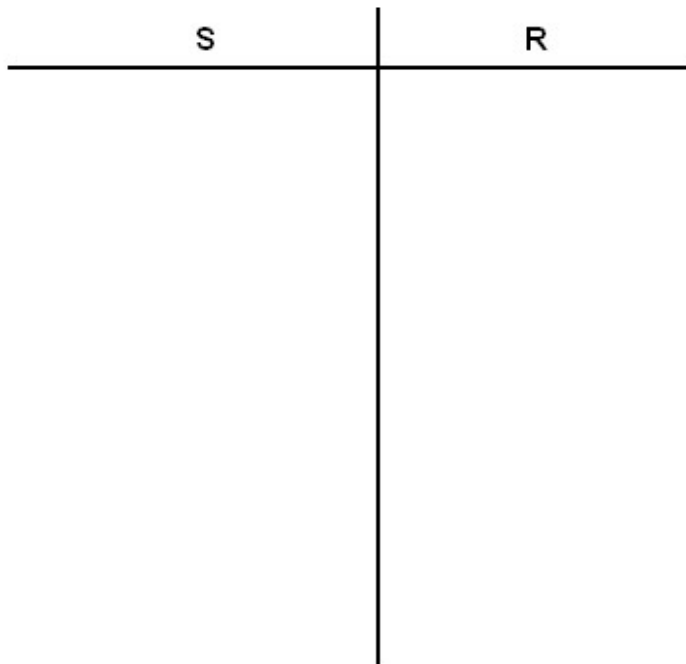
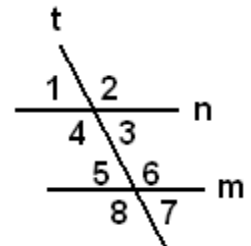


► **Converse of the Alternate Interior Angles Theorem (new theorem):**

If a transversal cuts two parallel lines,
then the alternate interior angle pairs are _____

Given:

Prove:



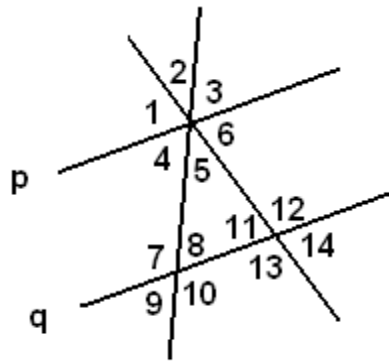
► **Converse of the Same-Side Interior Angles Theorem (new theorem): (prove as homework)**

If a transversal cuts two parallel lines,
then the same-side interior angle pairs are _____

► **Converse of the Alternate Exterior Angles Theorem (new theorem): (prove as homework)**

If a transversal cuts two parallel lines,
then the alternate exterior angle pairs are _____

[EX1]



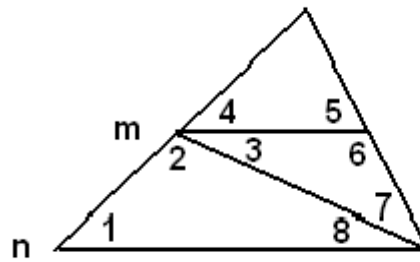
Given:

$m\angle 3 = 64^\circ$
 $m\angle 5 = 38^\circ$
 $p \parallel q$

Find:

$m\angle 6$
 $m\angle 10$
 $m\angle 11$
 $m\angle 13$
 $m\angle 14$

[EX2]



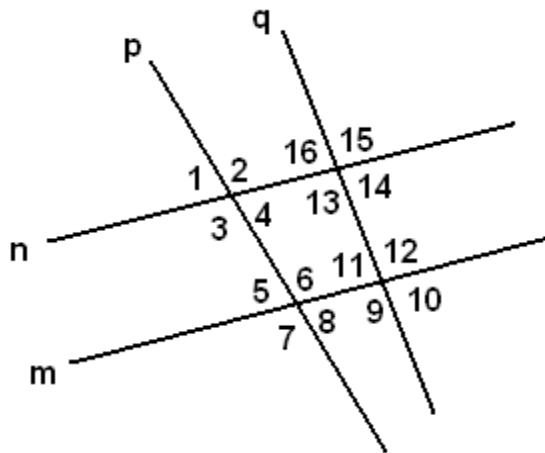
Given:

$m\angle 1 = 36^\circ$
 $m\angle 5 = 64^\circ$
 $m\angle 7 = 37^\circ$
 $m \parallel n$

Find:

$m\angle 2$
 $m\angle 3$
 $m\angle 4$
 $m\angle 6$
 $m\angle 8$

[EX3]



Given:

$m\angle 1 = 8x + y - 14$
 $m\angle 16 = 6x + 12y + 22$
 $m\angle 7 = 2x + 27y + 23$
 $m\angle 10 = 57y - 2x + 24$
 $m \parallel n$

Find:

$x =$
 $y =$
 $m\angle 3 =$
 $m\angle 9 =$