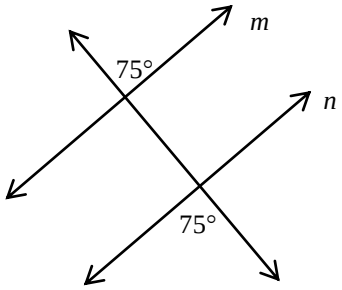
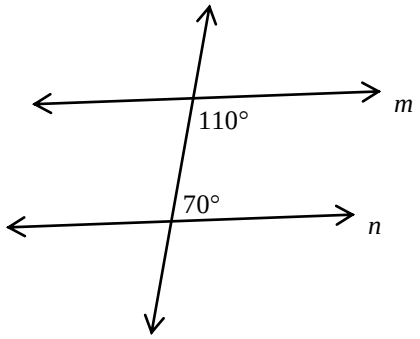
Name _____ HC3 – U4L1
Period: _____ Date: _____ Deductive Proofs 3

In 1– 4, state the postulate or theorem that allows you to conclude that $m \parallel n$.

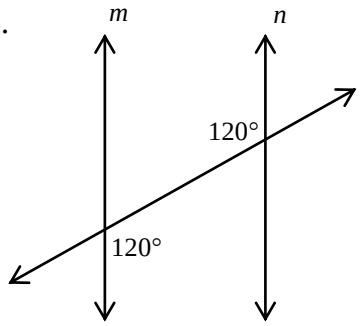
1.



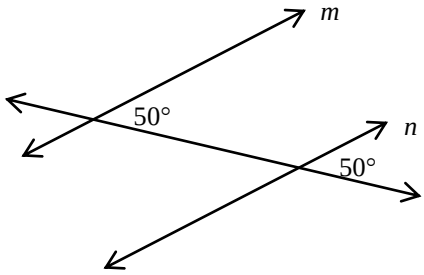
2.



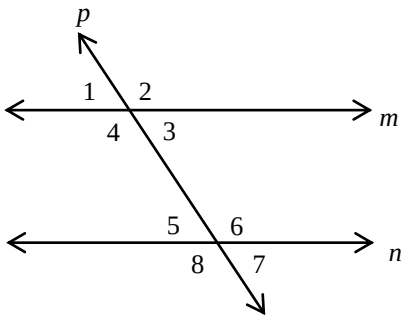
3.



4.



In 5-6, *m* || *n* and cut by transversal *p* as shown in the diagram.

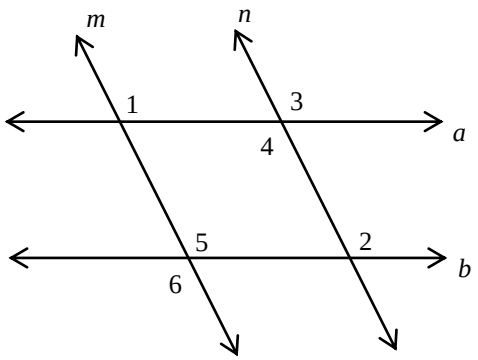


5. If m∠4 = 3*x* – 40 and m∠5 = *x* + 20, find:
   a. the value of *x*
   b. m∠5
   c. m∠4
   d. m∠3

6. If m∠2 = 2x + 40 and m∠6 = 3x + 20, find m∠2.

In 7-8, write a two-column proof.

7. *Given:* $m \parallel n$, $m\angle 1 = m\angle 2$
   Prove: $a \parallel b$



8. *Given:* $m \parallel n$, $\angle 1$ and $\angle 2$ are supplementary
   Prove: $a \parallel b$