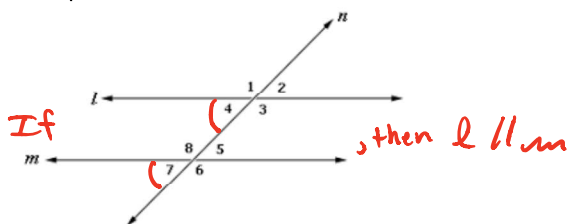


Transversals – Proving Lines Parallel

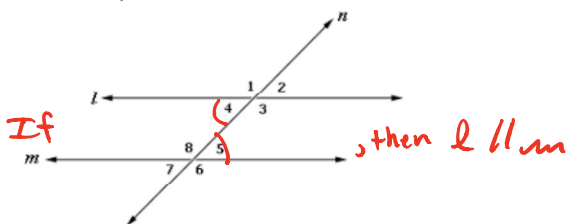
Notes Section 3.3

Name _____

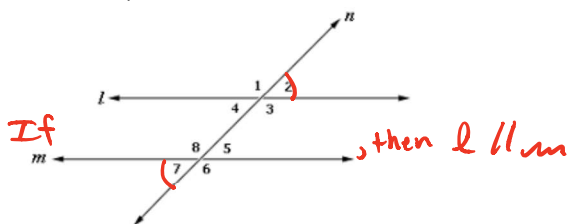
Converse to the Corresponding Angles Postulate – If corresponding angles are congruent, then a transversal cuts two parallel lines.



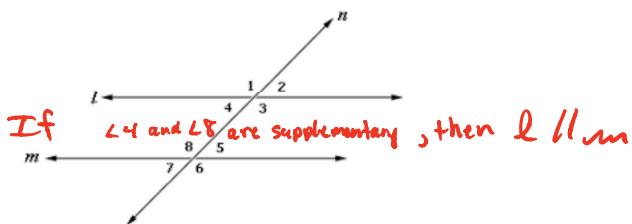
Converse to the Alternate Interior Angles Theorem – If alternate interior angles are congruent, then a transversal cuts two parallel lines.



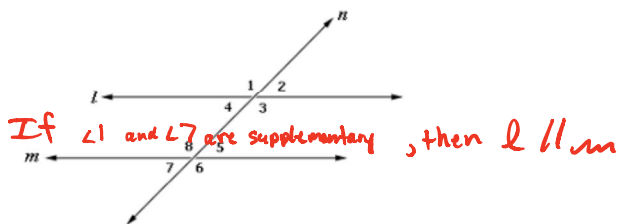
Converse to the Alternate Exterior Angles Theorem – If alternate exterior angles are congruent, then a transversal cuts two parallel lines.



Converse to the Consecutive Interior Angles Theorem – If consecutive interior angles are supplementary, then a transversal cuts two parallel lines.



Converse to the Consecutive Exterior Angles Theorem – If consecutive exterior angles are supplementary, then a transversal cuts two parallel lines.



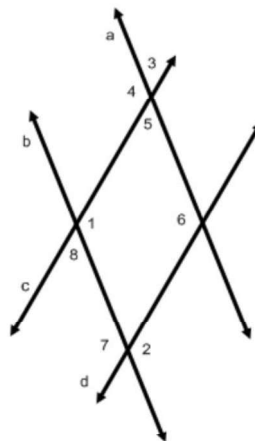
Which lines are parallel?

#1) $\angle 1 \cong \angle 2$ $c \parallel d$

#2) $\angle 2 \cong \angle 6$ $a \parallel b$

#3) $m\angle 1 + m\angle 5 = 180^\circ$ $a \parallel b$

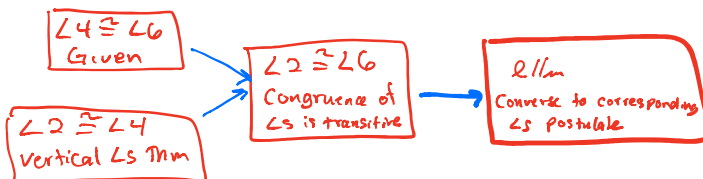
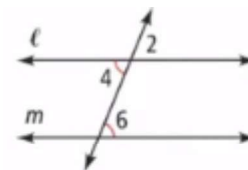
#4) $\angle 8 \cong \angle 3$ $a \parallel b$



Ex 5: Complete the flow proof.

Given: $\angle 4 \cong \angle 6$

Prove: $l \parallel m$



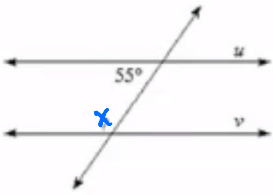
Transversals – Proving Lines Parallel

Notes Section 3.3

Name _____

Find the degree of the missing angle what would make lines w and v parallel.

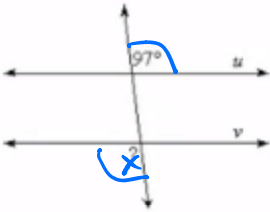
Ex 6:



$$55^\circ + x = 180^\circ$$

$$x = 125^\circ$$

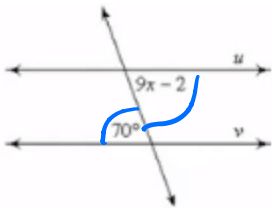
Ex 7:



$$97^\circ = x$$

Find the value of x that would make the lines w and v parallel.

Ex 8:

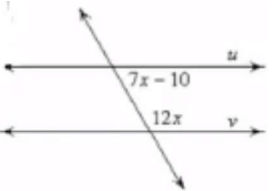


$$9x - 2 = 70$$

$$9x = 72$$

$$x = 8$$

Ex 9:



$$(7x - 10) + (12x) = 180$$

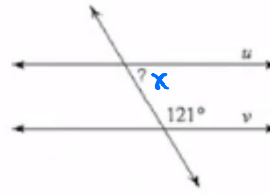
$$19x - 10 = 180$$

$$19x = 190$$

$$x = 10$$

Find the degree of the missing angle what would make lines w and v parallel.

Ex 10:

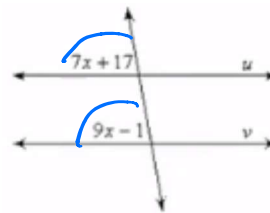


$$x + 121 = 180$$

$$x = 59^\circ$$

Find the value of x that would make the lines w and v parallel.

Ex 11:



$$7x + 17 = 9x - 1$$

$$7x + 18 = 9x$$

$$18 = 2x$$

$$9 = x$$