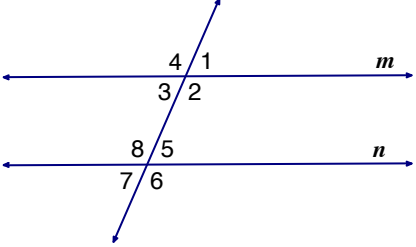
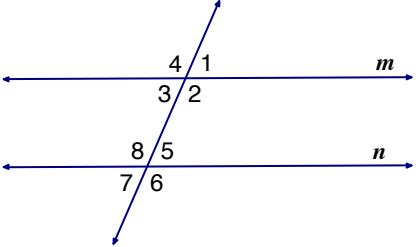
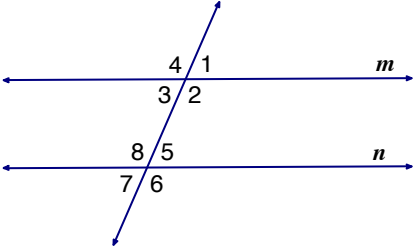
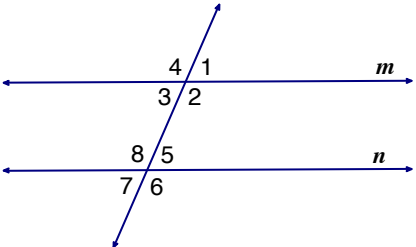
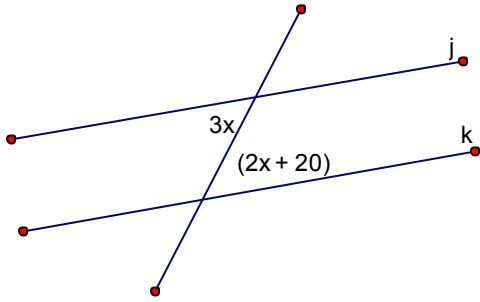


3-3 Proving Lines Parallel

Recall: What is the *converse* of the conditional statement “If today is September 23 then it is the first day of autumn”?

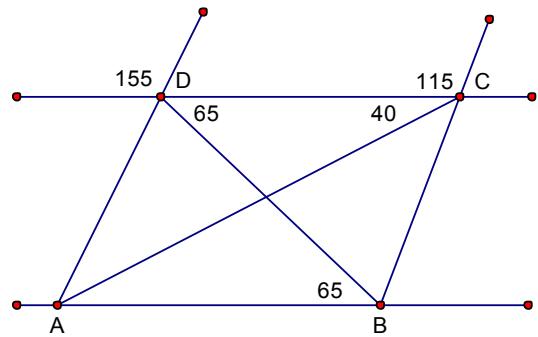
Corresponding Angles Converse Postulate	
Alternate Interior Angles Converse Theorem	
Consecutive Interior Angles Converse Theorem	
Alternate Exterior Angles Converse Theorem	

EX 1) Find the value of x that makes $j \parallel k$.



EX 2) Use the figure to the right to answer the following questions. Justify your answer.

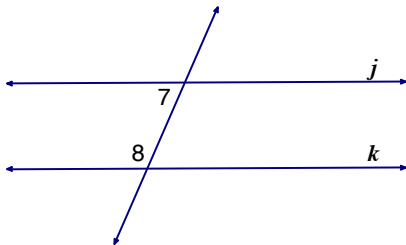
a) Is $\overrightarrow{AB} \parallel \overrightarrow{DC}$?



b) Is $\overrightarrow{BC} \parallel \overrightarrow{AD}$?

EX 3) Given: $m\angle 7 = 125^\circ$, $m\angle 8 = 55^\circ$

Prove: $j \parallel k$

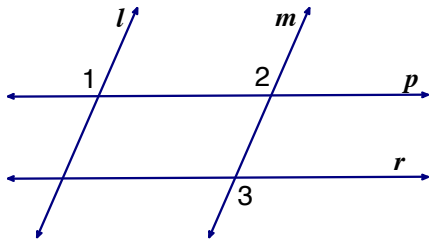


Statement	Reason
1.	1.
2.	2.
3.	3.
4.	4.

EX 4) Given: $l \parallel m$, $\angle 1 \cong \angle 3$

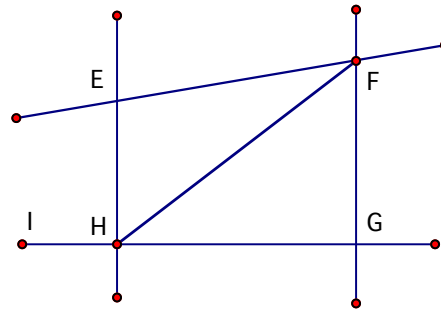
Statement	Reason
1.	1.
2.	2.

Prove: $r \parallel p$



3.	3.
4.	4.
5.	5.

EX 5) Given: $\angle EHF \cong \angle HFG$, $\overline{FG} \perp \overline{GH}$
 Prove: $\overline{EH} \perp \overline{GH}$



Statement	Reason

EX 6) Does the information given in the diagram allow you to conclude that $a \parallel b$? Explain.

