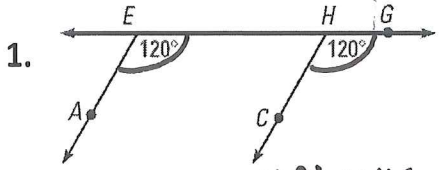


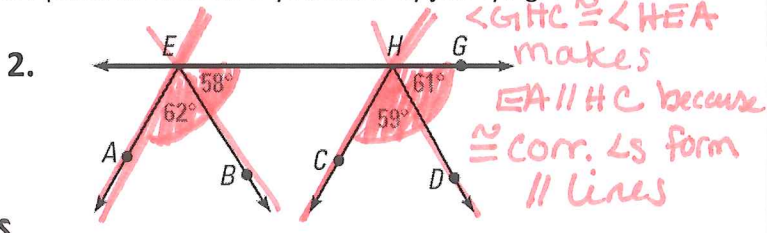
Name: Key

**ACC Geometry: What Lines Are Parallel Worksheet**

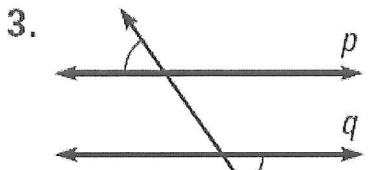
Directions: Given the information, determine which lines, if any are parallel. State how you know by justifying.



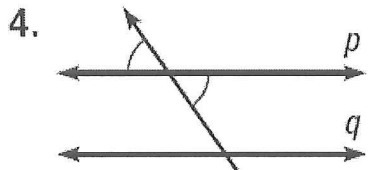
$\angle AEH \cong \angle CHG$  makes  $EA \parallel HC$  because  $\cong$  Corr.  $\angle$ s form  $\parallel$  lines.



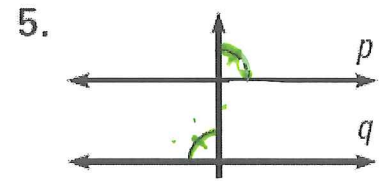
$\angle GHE \cong \angle HEA$  makes  $EA \parallel HC$  because  $\cong$  Corr.  $\angle$ s form  $\parallel$  lines



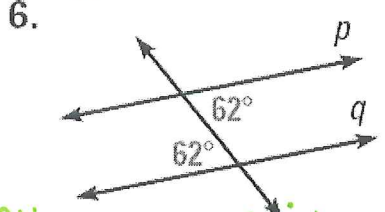
$p \parallel q$  because  $\cong$  alt. ext. angles form  $\parallel$  lines



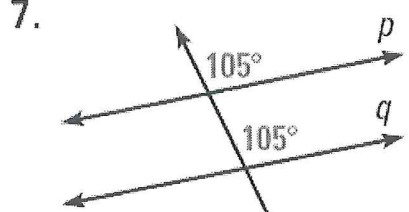
Not parallel



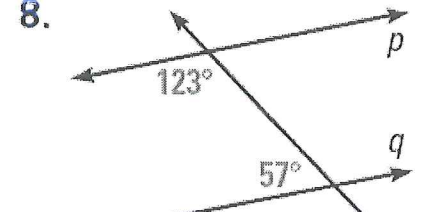
nope



$p \parallel q$   $\cong$  alt int  $\angle$ s form  $\parallel$  lines



$p \parallel q$   $\cong$  Corr.  $\angle$ s form  $\parallel$  lines

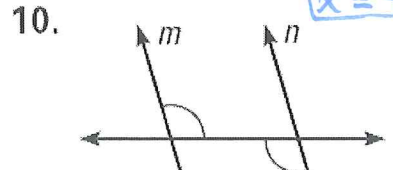
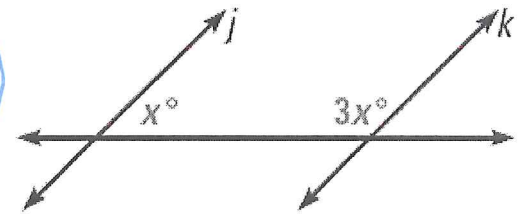


$p \parallel q$  Suppl. con. int  $\angle$ s form  $\parallel$  lines

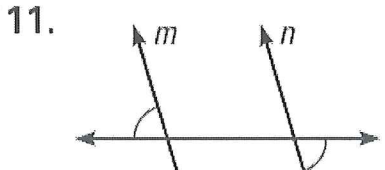
9. Find the value of  $x$  that makes  $j \parallel k$ . Which postulate or theorem about parallel lines supports your answer?

$x + 3x = 180$   
 $4x = 180$   
 $x = 45$

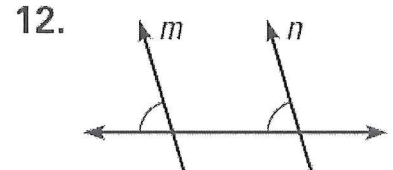
Suppl. con. int  $\angle$ s form  $\parallel$  lines



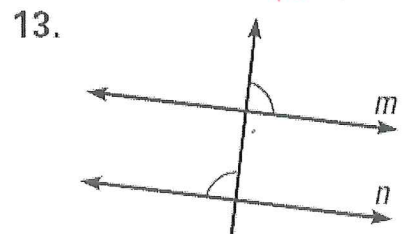
$m \parallel n$   $\cong$  alt int  $\angle$ s form  $\parallel$  lines



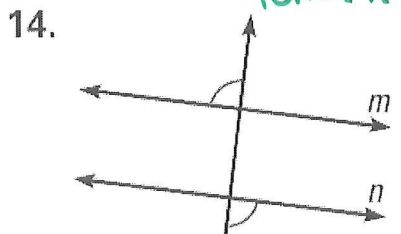
$m \parallel n$   $\cong$  alt ext  $\angle$ s form  $\parallel$  lines



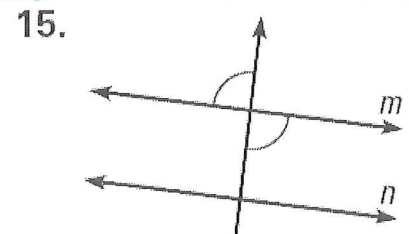
$m \parallel n$   $\cong$  Corr.  $\angle$ s form  $\parallel$  lines



no




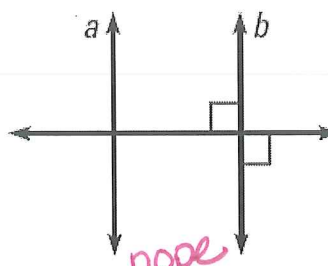
$m \parallel n$   $\cong$  alt ext.  $\angle$ s form  $\parallel$  lines.

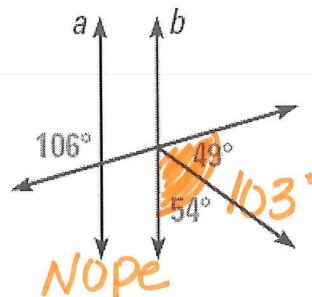


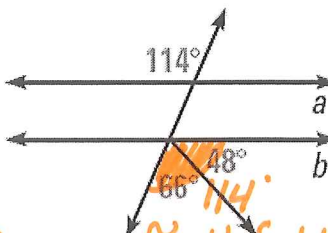
no

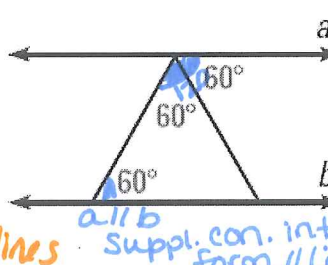
**LOGICAL REASONING** Is it possible to prove that lines  $a$  and  $b$  are parallel? If so, explain how.

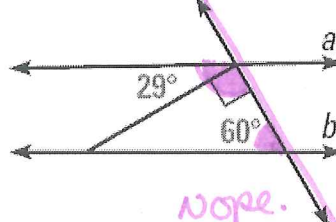
20.  *all b  
Suppl. con. int  
∠s form  
|| lines.*

21.  *nope*

22.  *NOPE*

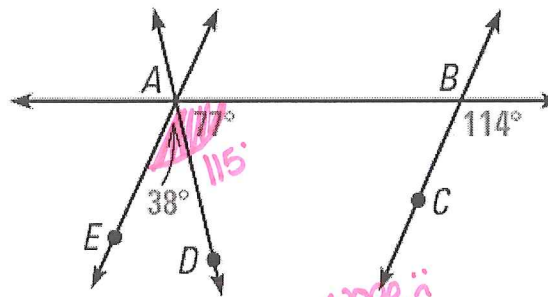
23.  *all b because ≅ alt. ext. ∠ form || lines*

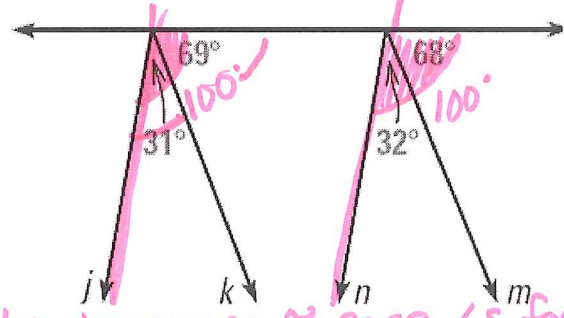
24.  *all b  
Suppl. con. int ∠s  
form || lines*

25.  *nope.*

*all b because ≅ alt. ext. ∠ form || lines*

**LOGICAL REASONING** Which lines, if any, are parallel? Explain.

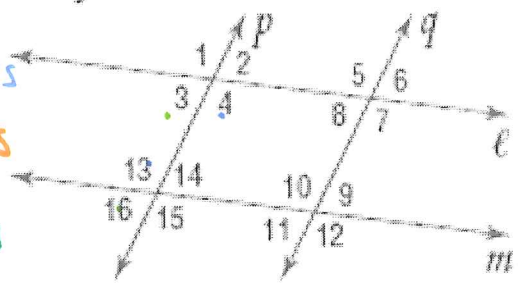
26.  *nope*

27.  *j || n because ≅ corr. ∠s form || lines*

From textbook:

Given the following information, determine which lines, if any, are parallel. State the postulate or theorem that justifies your answer.

- $\angle 16 \cong \angle 3$  *l || m ≅ corr. ∠s form || lines*
- $\angle 4 \cong \angle 13$  *l || m ≅ alt. int. ∠s form || lines*
- $m\angle 14 + m\angle 10 = 180$  *p || q Suppl. con. int ∠s form || lines*
- $\angle 1 \cong \angle 7$  *p || q ≅ alt. ext. ∠s form || lines*



Given the following information, determine which lines, if any, are parallel. State the postulate or theorem that justifies your answer.

- $\angle AEF \cong \angle BFG$  *AE || BF ≅ corr. ∠s form || lines*
- $\angle EAB \cong \angle DBC$  *AE || BF ≅ corr. ∠s form || lines*
- $\angle EFB \cong \angle CBF$  *EG || AC ≅ alt. int ∠s form || lines*
- $m\angle GFD + m\angle CBD = 180$  *EG || AC Suppl. con. int ∠s form || lines*

