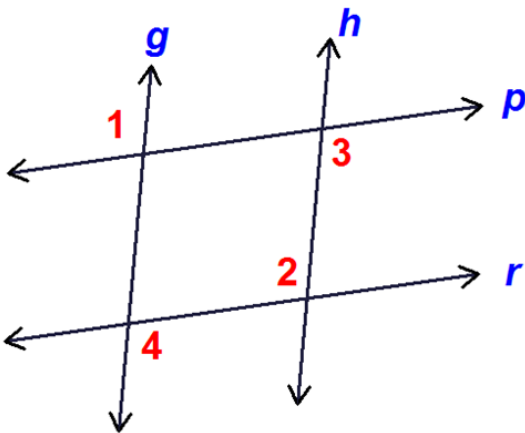


In your groups, please work together to complete each proof below! You may complete them in any order. You may not need to use all provided space for each proof.

## REASON BANK

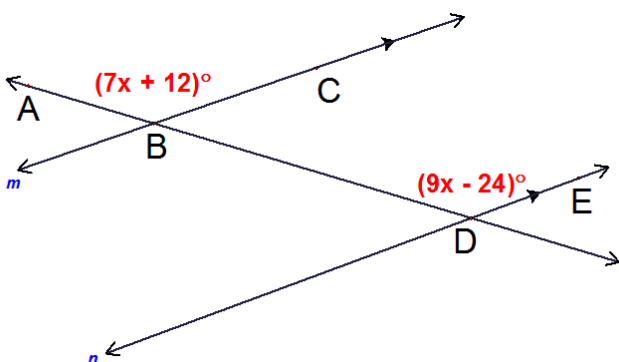
Addition Property of Equality Alternate Interior Angles Theorem Alternate Interior Angles Converse Alternate Exterior Angles Theorem Alternate Exterior Angles Converse Combine Like Terms Congruent Complements Theorem Congruent Supplements Theorem Consecutive Interior Angles Theorem Consecutive Interior Angles Converse Corresponding Angles Postulate	Corresponding Angles Converse Division Property Distributive Property Given Linear Pair Postulate Multiplication Property Simplification Substitution Property Subtraction Property Transitive Property Vertical Angles Theorem
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1. **Given:**  $\angle 1 \cong \angle 2, p \parallel r$   
**Prove:**  $\angle 2 \cong \angle 4$



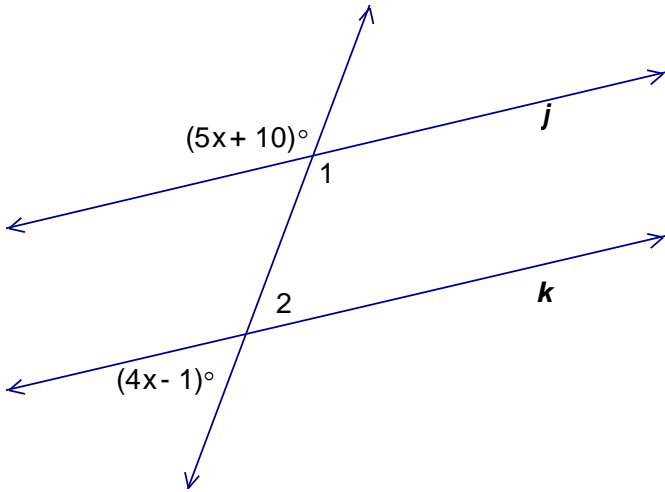
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

2. **Given:**  $m\angle ABC = (7x + 12)^\circ, m\angle BDE = (9x - 24)^\circ$  and  $m \parallel n$   
**Prove:**  $m\angle ABC = 138^\circ$



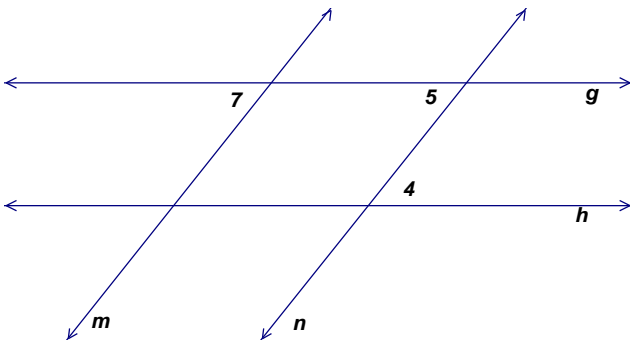
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

3. **Given:**  $j \parallel k$  and the measures of the angles in the diagram  
**Prove:**  $x = 19$



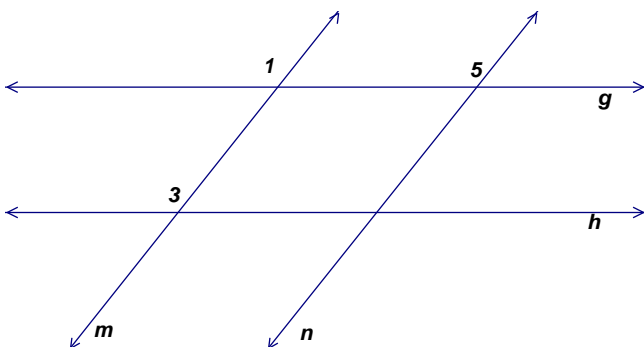
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

4. **Given:**  $g \parallel h$  and  $m \parallel n$   
**Prove:**  $\angle 7 \cong \angle 4$



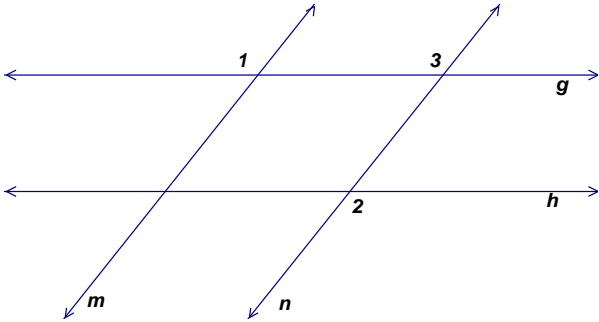
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

5. **Given:**  $g \parallel h$  and  $\angle 1 \cong \angle 5$   
**Prove:**  $\angle 5 \cong \angle 3$



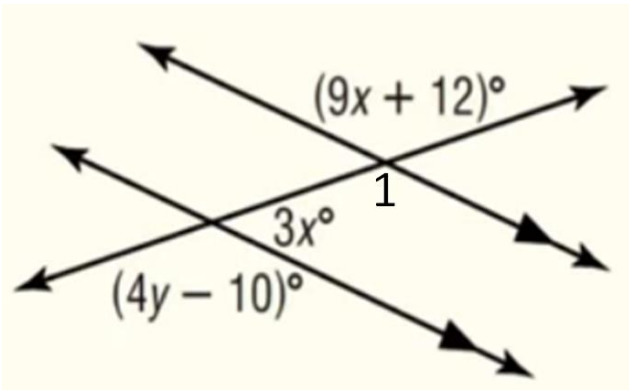
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

6. **Given:**  $m \parallel n$  and  $\angle 1 \cong \angle 2$   
**Prove:**  $g \parallel h$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.

7. **Given:** The lines are parallel and the measures of the angles in the diagram  
**Prove:**  $x = 14$  and  $y = 37$



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.
9.	9.
10.	10.
11.	11.
12.	12.
13.	13.