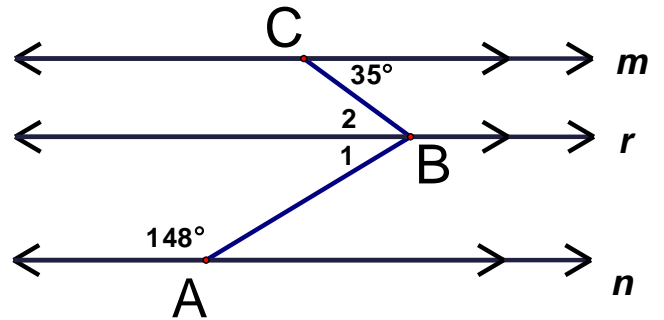


REASON BANK

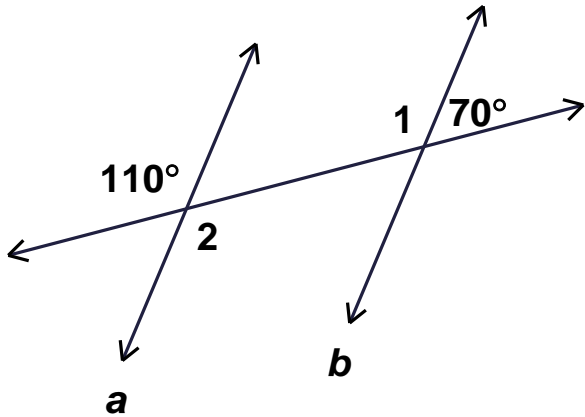
Addition Property of Equality Alternate Interior Angles Theorem Alternate Interior Angles Converse Alternate Exterior Angles Theorem Alternate Exterior Angles Converse Combine Like Terms Congruent Complements Theorem Congruent Supplements Theorem Consecutive Interior Angles Theorem Consecutive Interior 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: Lines m , r , and n are all parallel to each other
 Prove: $m\angle ABC = 67^\circ$



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

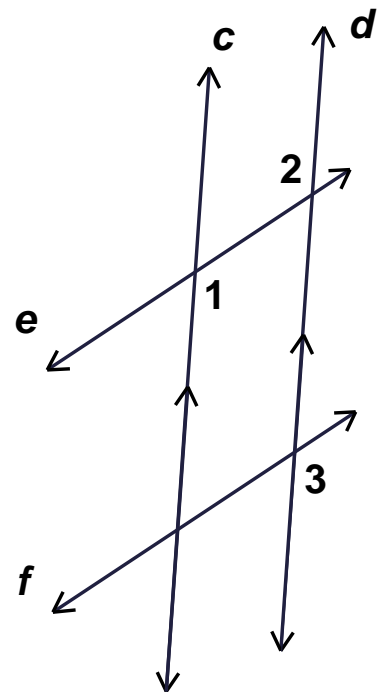
2. Given the measures in the diagram, please prove $a \parallel b$.



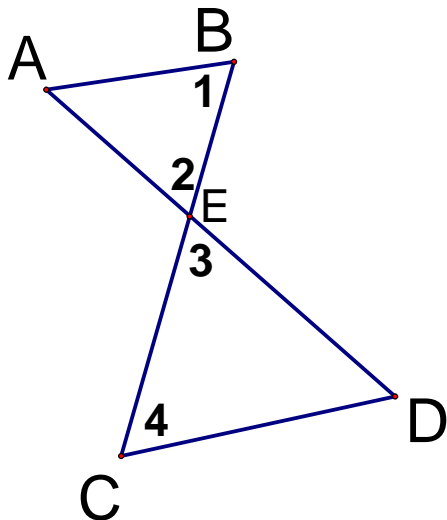
Statements	Reasons
1. Diagram w/values	1. Given
2.	2.
3.	3.
4.	4.
5.	5.

3. Given $\angle 1 \cong \angle 3$ and $c \parallel d$, please prove $e \parallel f$.

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

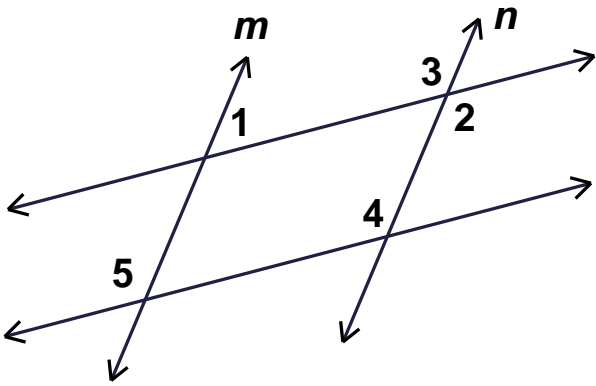


4. Given $\overline{AB} \parallel \overline{CD}$ and $\angle 2 \cong \angle 4$, please prove $\angle 1 \cong \angle 3$



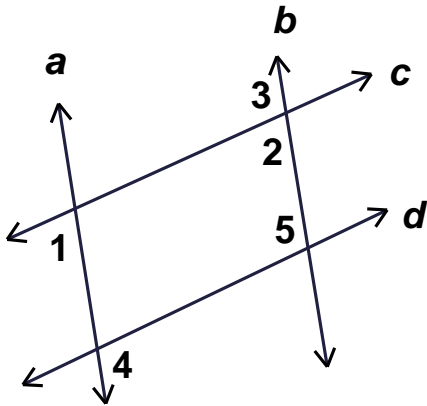
Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

5. Given $\angle 1$ and $\angle 2$ are supplementary, please prove $\angle 4 \cong \angle 5$.



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

6. Given that $\angle 1 \cong \angle 2$ and $\angle 3 \cong \angle 4$, please prove $c \parallel d$.



Statements	Reasons
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.
6.	6.
7.	7.
8.	8.

Answer Key:

1.

Statements	Reasons
1. Lines m , r , and n are all parallel to each other	1. Given
2. $m\angle 2 = 35^\circ$	2. Alternate Interior Angles Theorem
3. $m\angle 1 + 148 = 180^\circ$	3. Consecutive Interior Angles Theorem
4. $m\angle 1 = 32^\circ$	4. Subtraction Property
5. $m\angle ABC = m\angle 1 + m\angle 2$	5. Angle Addition Postulate
6. $m\angle ABC = 32^\circ + 35^\circ$	6. Substitution
7. $m\angle ABC = 67^\circ$	7. Simplification

2.

Statements	Reasons
1. Diagram w/values	1. Given
2. $m\angle 1 + 70 = 180$	2. LPP
3. $m\angle 1 = 110$	3. Subtraction POE
4. $m\angle 2 = 110$	4. VAT
5. $m\angle 1 = m\angle 2$	5. Transitive
6. $a \parallel b$	6. Alt. Int. \angle Converse

3.

Statements	Reasons
1. $c \parallel d$	1. Given
2. $\angle 1 \cong \angle 2$	2. Alt Int \angle Theorem
3. $\angle 1 \cong \angle 3$	3. Given
4. $\angle 2 \cong \angle 3$	4. Transitive Property
5. $e \parallel f$	5. Alternate Ext \angle Converse

4.

Statements	Reasons
1. $\overline{AB} \parallel \overline{CD}$	1. Given
2. $\angle 1 \cong \angle 4$	2. Alt Int \angle Theorem
3. $\angle 2 \cong \angle 4$	3. Given
4. $\angle 2 \cong \angle 3$	4. VAT
5. $\angle 1 \cong \angle 3$	5. Transitive Property

5.

Statements	Reasons
1. $\angle 1$ and $\angle 2$ are Supplementary	1. Given
2. $\angle 2 \cong \angle 3$	2. VAT
3. $\angle 1$ and $\angle 3$ are Supplementary	3. Substitution Property
4. $m \parallel n$	4. Cons Int \angle Converse
5. $\angle 4 \cong \angle 5$	5. Corresponding Angles Postulate

6.

Statements	Reasons
1. $\angle 1 \cong \angle 2$	1. Given
2. $a \parallel b$	2. Corr \angle Converse
3. $\angle 4 \cong \angle 5$	3. Alt Int \angle Theorem
4. $\angle 3 \cong \angle 4$	4. Given
5. $\angle 3 \cong \angle 5$	5. Transitive Property
6. $c \parallel d$	6. Corr \angle Converse