Geometry[sirimanne]

Unit 3 Lesson 5

Name:

Date: Period: 1 2 3 4 5 6

Standards: 1.0 Holt: 2-6 Geometric proof p.110

Objective

Linear Pair

Q1: What is your definition of "linear pair"?

Q2: What is Sirimanne's definition?

Linear Pair theorem

2-6-1 If: Then:

▼ **Application:** ∠J , ∠K form a linear pair

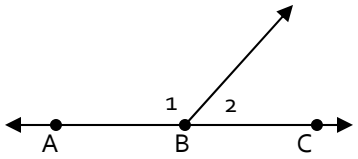
Statement	Reason
∠J , ∠K form a linear pair	

Example 1.
Given that an angle is 137 and part of a linear pair, then what is the other angle?

Example 2.
Given that a linear pair has angles of 3x + 7 and 2x + 13.
What are the measures of the two angles?

Proof Given: ∠1 , ∠2 form a linear pair

Prove: ∠1 , ∠2 are supplementary



Statements	Reasons
1 ∠1 , ∠2 form a linear pair	1
2	2
3	3
4	4
5	5
6	6

Geometry sirimanne

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Objective To prove the linear pair theorem and use it in other proofs as demonstrated by guided practice, independent practice, and homework

Linear Pair

Q1: What is your definition of "linear pair"?

Q2: What is Sirimanne's definition? The midpoint is the point between two other points where it cuts the segment into two equal parts

Linear Pair theorem

2-6-1 If two angles form a linear pair, then they are supplementary

If: ∠A , ∠B form a linear pair Then: ∠A , ∠B are supplementary

▼ **Application:** ∠J , ∠K form a linear pair

Statement	Reason
∠J , ∠K form a linear pair	
∠J , ∠K are supplementary	Linear Pair theorem
m∠J + m∠K = 180	Def. of supplementary

Example 1.
Given that an angle is 137 and part of a linear pair, then what is the other angle?

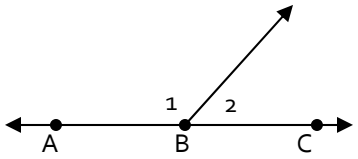
43°

Example 2.
Given that a linear pair has angles of 3x + 7 and 2x + 13.
What are the measures of the two angles?

x =32
71°
109°

Proof Given: ∠1 , ∠2 form a linear pair

Prove: ∠1 , ∠2 are supplementary



Statements	Reasons
1 ∠1 , ∠2 form a linear pair	1 Given
2 BA and BC form a line	2 Def. of a linear pair
3 m∠ABC = 180	3 Def. of straight line
4 m∠1 + m∠2 = m∠ABC	4 Addition Postulate
5 m∠1 + m∠2 = 180	5 Substitution prop
6 ∠1 , ∠2 are supplementary	6 Def of Supplementary Angles