Geometry^{0809}

Unit 3 Lesson 4 Sirimanne Edition

Name:

Date: Period: 1 2 3 4 5 6

Standards: 2.0, 16.0 Holt: 1-2 Measuring p.15

Objective To write a proof involving midpoints and segment addition postulate as demonstrated by guided practice, independent practice, and homework [unit3 midpoint proofs A]

Midpoint

Q1: What is your definition of "midpoint"?

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

▼ **Application: I** is the midpoint of points **M** and **D**.

Statement	Reason
I is the midpoint of M and D	
MI = MD	Definition of midpoint

Q3: How would you describe the Segment Addition postulate?

Q2: How did Sirimanne describe it? When a segment is broken into two parts, then the two parts add up to the larger original segment

▼ **Application: R is between P and O**

Statement	Reason
R is between P and O	
PR + RO = PO	Segment Addition Postulate

Example 1 Given: E is between P and R

PE = 10

PR= 20

Prove: **E is the midpoint** of PR

Statements	Reasons
E is between P and R	Given
PE =10	Given
PR = 20	Given
PE + ER = PR	Segment Addition Postulate
10 + ER = 20	Substitution
ER = 10	Subtraction
PE = ER	Transitive Property [or substitution]
E is the midpoint of PR	Definition of Midpoint