1. Given√ 2. Definition of Midpoint√ 3. Vertical Angles theorem√ 4. SAS Triangle Congruence Postulate√ 6. Definition of Congruent Angles√ 7. Angle Addition Postulate√ 8. Law of Substitution v 9. The whole is greater than its parts. 🗸 2. Reasons Given ✓ 2. Definition of Midpoint ✓ 3. Transitive Property v 4. Base Angles Theorem 🗸

Activity 4.4.1: Proving Inequalities in a Triangle

Total points = 31

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Total points = 31

1. Reasons

1. Given

5. CPCTC

2. Reasons

3. Reasons

1. Given ✓

2. CPCTC <

6. CPCTC V

1. Reasons

1. Given ✓

2. Definition of Midpoint√

3. Vertical Angles theorem√

7. Angle Addition Postulate

8. Law of Substitution 🗸

2. Definition of Midpoint <

Base Angles Theorem ✓

5. Angle Addition Postulate 🗸

3. Transitive Property 🗸

6. Law of Substitution 🗸

10. Law of Substitution 🗸

11. Law of Substitution 🗸

4. Reflexive Property ✓

8. Law of Substitution 🗸

10. Law of Substitution 🗸

11. Law of Substitution 🗸

5. SAS Postulate ✓

4. SAS Triangle Congruence Postulate√

9. The whole is greater than its parts. 🗸

7. The whole is greater than its parts. \checkmark

8. Angle-Side Relationship theorem 🗸

9. Segment Addition Postulate 🗸

3. Definition of Angle Bisector 🗸

7. Triangle Inequality theorem ✓

9. Segment Addition Postulate 🗸

6. Definition of Congruent Angles√

5. Angle Addition Postulate 🗸 6. Law of Substitution 🗸 7. The whole is greater than its parts. 🗸 8. Angle-Side Relationship theorem 🗸 9. Segment Addition Postulate 🗸 10. Law of Substitution 🗸

11. Law of Substitution 🗸 3. Reasons

1. Given v

2. CPCTC ✓

3. Definition of Angle Bisector 🗸

 Reflexive Property ✓ SAS Postulate ✓

6. CPCTC V

Triangle Inequality theorem ✓

8. Law of Substitution 🗸

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8. Law of Substitution 🗸

9. The whole is greater than its parts. <

2. Reasons

1. Given ✓

2. Definition of Midpoint <

Transitive Property ✓

4. Base Angles Theorem ✓ Angle Addition Postulate √

6. Law of Substitution 🗸

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Activity 4.4.1: Proving Inequalities in a Triangle

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Reflexive Property ✓

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CPCTC ✓

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