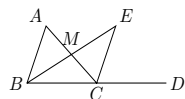


### Quiz 4.3: Proving Inequalities in a Triangle

**Multiple Choice:** Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.

- If  $\angle A \cong \angle ECM$ , what is the reason that makes the statement  $m\angle A = m\angle ECM$  true?
  - Angle Addition Postulate
  - Definition of Congruent Angles
  - Segment Addition Postulate
  - Transitive Property
- If  $C$  lies on  $\overline{BD}$ , what is the reason that makes the statement  $BD = BC + CD$  true?
  - Angle Addition Postulate
  - Definition of Congruent Angles
  - Segment Addition Postulate
  - Transitive Property
- Which theorem states that if two sides of a triangle are congruent, then the angles opposite them are congruent?
  - Angle-Side Relationship theorem
  - Base Angles theorem
  - Hinge theorem
  - Triangle Inequality theorem
- Which theorem states that in a triangle, the side opposite the larger angle is the longer side?
  - Angle-Side Relationship theorem
  - Base Angles theorem
  - Hinge theorem
  - Triangle Inequality theorem

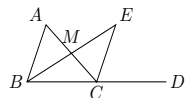
5. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $AM \cong CM, BM \cong EM$  true?



- CPCTC
- Definition of Midpoint
- Given

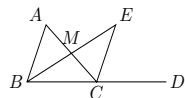
D. Vertical Angles theorem

6. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\angle A \cong \angle ECM$  true?



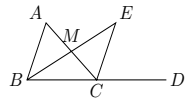
- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

7. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\triangle AMB \cong \triangle CME$  true?



- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

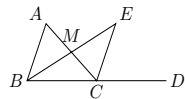
8. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\angle AMB \cong \angle CME$  true?



- CPCTC
- Definition of Midpoint
- Given

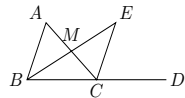
D. Vertical Angles theorem

9. If  $m\angle A = m\angle ECM$  and  $m\angle ACD = m\angle ECD + m\angle ECM$ , what is the reason that makes the statement  $m\angle ACD = m\angle ECD + m\angle A$  true?



- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

10. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $m\angle ACD = m\angle ECD + m\angle ECM$  true?



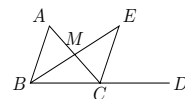
- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

### Quiz 4.3: Proving Inequalities in a Triangle

**Multiple Choice:** Choose the letter that corresponds to the correct answer. Write the answer in your answer sheet.

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  - Hinge theorem
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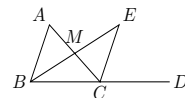
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- CPCTC
- Definition of Midpoint
- Given

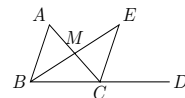
D. Vertical Angles theorem

6. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\angle A \cong \angle ECM$  true?



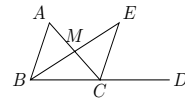
- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

7. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\triangle AMB \cong \triangle CME$  true?



- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

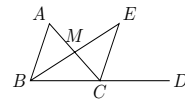
8. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $\angle AMB \cong \angle CME$  true?



- CPCTC
- Definition of Midpoint
- Given

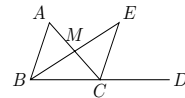
D. Vertical Angles theorem

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- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate

10. Given:  $M$  is the midpoint of  $\overline{AC}$  and  $\overline{BE}$  What is the reason that makes the statement  $m\angle ACD = m\angle ECD + m\angle ECM$  true?



- Angle Addition Postulate
- CPCTC
- Law of Substitution
- SAS Triangle Congruence Postulate