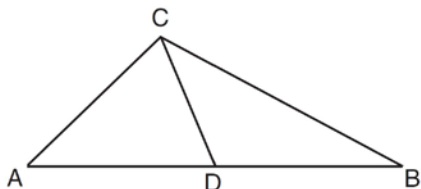


G.G.24: Statements: Determine the negation of a statement and establish its truth value

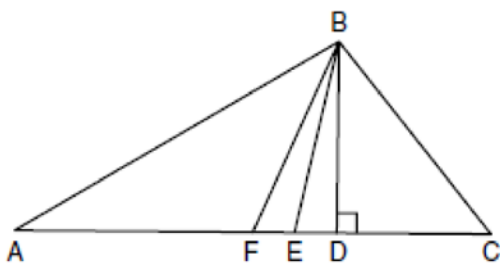
- 1 As shown in the diagram below, \overline{CD} is a median of $\triangle ABC$.



Which statement is *always* true?

- 1) $\overline{AD} \cong \overline{DB}$
- 2) $\overline{AC} \cong \overline{AD}$
- 3) $\angle ACD \cong \angle CDB$
- 4) $\angle BCD \cong \angle ACD$

- 2 Given $\triangle ABC$ with base \overline{AFEDC} , median \overline{BF} , altitude \overline{BD} , and \overline{BE} bisects $\angle ABC$, which conclusion is valid?

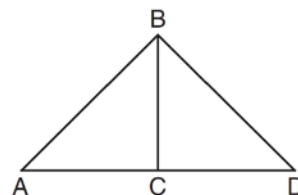


- 1) $\angle FAB \cong \angle ABF$
- 2) $\angle ABF \cong \angle CBD$
- 3) $\overline{CE} \cong \overline{EA}$
- 4) $\overline{CF} \cong \overline{FA}$

- 3 In $\triangle ABC$, D is a point on \overline{AC} such that \overline{BD} is a median. Which statement must be true?

- 1) $\triangle ABD \cong \triangle CBD$
- 2) $\angle ABD \cong \angle CBD$
- 3) $\overline{AD} \cong \overline{CD}$
- 4) $\overline{BD} \perp \overline{AC}$

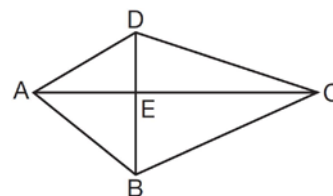
- 4 Given: $\triangle ABD$, \overline{BC} is the perpendicular bisector of \overline{AD}



Which statement can *not* always be proven?

- 1) $\overline{AC} \cong \overline{DC}$
- 2) $\overline{BC} \cong \overline{CD}$
- 3) $\angle ACB \cong \angle DCB$
- 4) $\triangle ABC \cong \triangle DBC$

- 5 In the diagram below of quadrilateral $ABCD$, diagonals \overline{AEC} and \overline{BED} are perpendicular at E .



Which statement is always true based on the given information?

- 1) $\overline{DE} \cong \overline{EB}$
- 2) $\overline{AD} \cong \overline{AB}$
- 3) $\angle DAC \cong \angle BAC$
- 4) $\angle AED \cong \angle CED$

G.G.24: Statements: Determine the negation of a statement and establish its truth value
Answer Section

- | | | |
|---|--------|-----------------|
| 1 | ANS: 1 | REF: 011303ge |
| 2 | ANS: 4 | REF: fall0810ge |
| 3 | ANS: 3 | REF: 080608b |
| 4 | ANS: 2 | REF: 081301ge |
| 5 | ANS: 4 | REF: 081417ge |