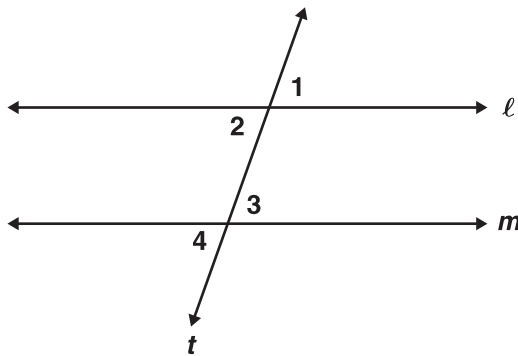


- 7 Use the proof to answer the question below.

Given: $\angle 2 \cong \angle 3$

Prove: $\angle 1 \cong \angle 4$



<u>Statement</u>	<u>Reason</u>
1. $\angle 2 \cong \angle 3$	1. Given
2. $\angle 1 \cong \angle 2$; $\angle 3 \cong \angle 4$	2. ?
3. $\angle 1 \cong \angle 4$	3. Transitive Property

What reason can be used to justify statement 2?

- A Complements of congruent angles are congruent.
- B Vertical angles are congruent.
- C Supplements of congruent angles are congruent.
- D Corresponding angles are congruent.

CSG10069

Geometry

Released Test Questions

- 8 “Two lines in a plane always intersect in exactly one point.”

Which of the following best describes a counterexample to the assertion above?

- A coplanar lines
- B parallel lines
- C perpendicular lines
- D intersecting lines

CSG00320

- 9 Which figure can serve as a counterexample to the conjecture below?

If one pair of opposite sides of a quadrilateral is parallel, then the quadrilateral is a parallelogram.

- A rectangle
- B rhombus
- C square
- D trapezoid

CSG10194

- 10 Given: $TRAP$ is an isosceles trapezoid with diagonals \overline{RP} and \overline{TA} . Which of the following *must* be true?

- A $\overline{RP} \perp \overline{TA}$
- B $\overline{RP} \parallel \overline{TA}$
- C $\overline{RP} \cong \overline{TA}$
- D \overline{RP} bisects \overline{TA}

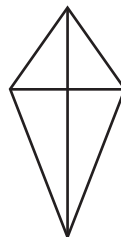
CSG00260

- 11 A conditional statement is shown below.

If a quadrilateral has perpendicular diagonals, then it is a rhombus.

Which of the following is a counterexample to the statement above?

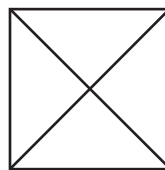
A



C



B



D

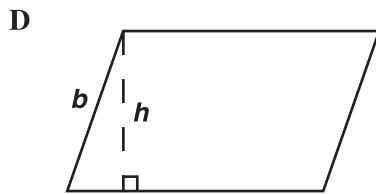
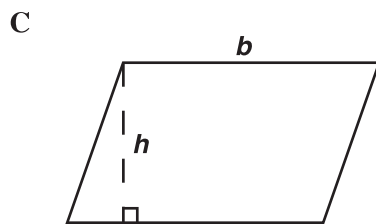
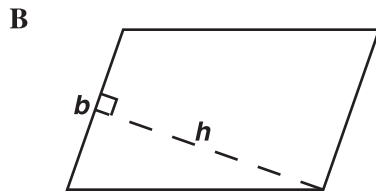
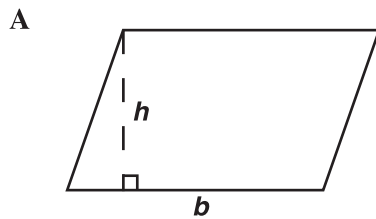


CSG20216

- 12** Students in a class rewrote theorems in their own words. One student wrote the following statement.

The area of a parallelogram is the product of any base (b) and any height (h).

Which figure shows a counterexample to prove the statement *false*?



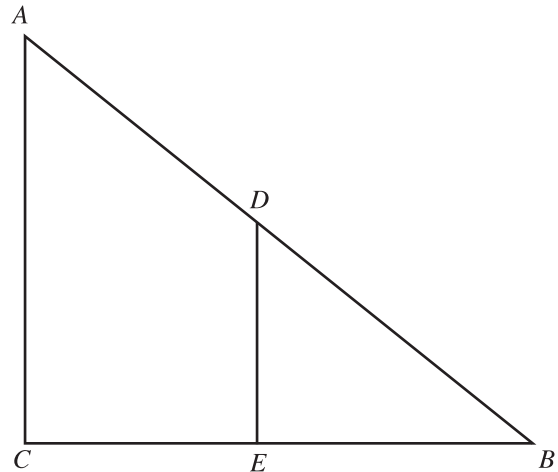
CSG10102

- 13** Which triangles must be similar?

- A two obtuse triangles
- B two scalene triangles with congruent bases
- C two right triangles
- D two isosceles triangles with congruent vertex angles

CSG00578

- 14** Which of the following facts would be sufficient to prove that triangles ABC and DBE are similar?



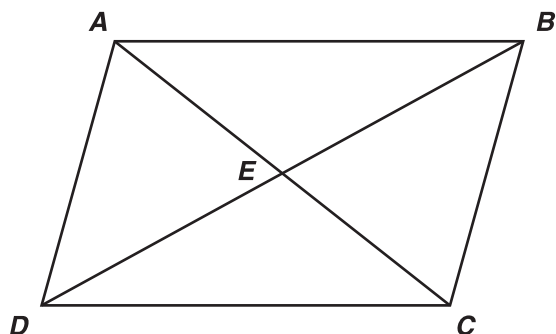
- A \overline{CE} and \overline{BE} are congruent.
- B $\angle ACE$ is a right angle.
- C \overline{AC} and \overline{DE} are parallel.
- D $\angle A$ and $\angle B$ are congruent.

CSG00544

Geometry

Released Test Questions

- 15 Parallelogram $ABCD$ is shown below.



Which pair of triangles can be established to be congruent to prove that $\angle DAB \cong \angle BCD$?

- A $\triangle ADC$ and $\triangle BCD$
- B $\triangle AED$ and $\triangle BEC$
- C $\triangle DAB$ and $\triangle BCD$
- D $\triangle DEC$ and $\triangle BEA$

CSG10146

- 16 If $\triangle ABC$ and $\triangle XYZ$ are two triangles such that $\frac{AB}{XY} = \frac{BC}{YZ}$, which of the following would be sufficient to prove the triangles are similar?

- A $\angle A \cong \angle X$
- B $\angle B \cong \angle Y$
- C $\angle C \cong \angle Z$
- D $\angle X \cong \angle Y$

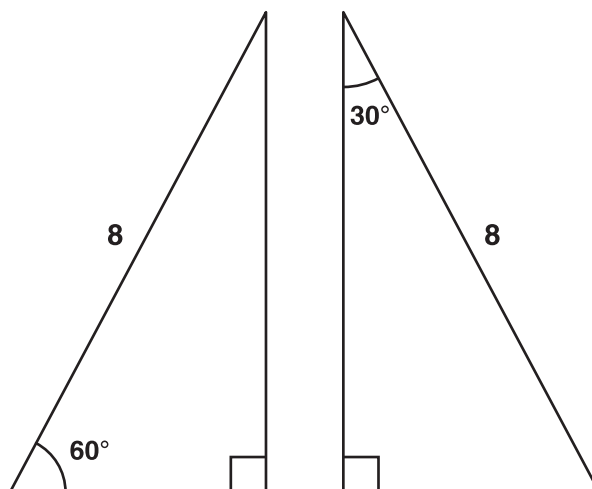
CSG10218

- 17 In parallelogram $FGHI$, diagonals \overline{IG} and \overline{FH} are drawn and intersect at point M . Which of the following statements *must* be true?

- A $\triangle FGI$ must be an obtuse triangle.
- B $\triangle HIG$ must be an acute triangle.
- C $\triangle FMG$ must be congruent to $\triangle HMG$.
- D $\triangle GMH$ must be congruent to $\triangle IMF$.

CSG00559

- 18 Which of the following *best* describes the triangles shown below?



- A both similar and congruent
- B similar but not congruent
- C congruent but not similar
- D neither similar nor congruent

CSG00478