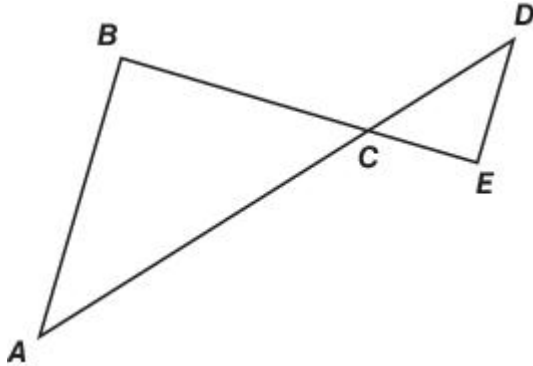


Directions: Please choose the best answer choice for each of the following questions.

1. Which statement is sufficient to prove that $\triangle ABC \sim \triangle DEC$?



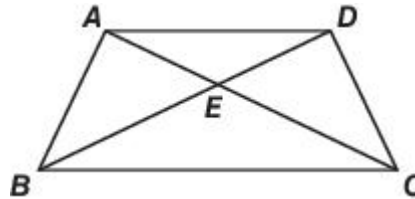
- A. $\overline{AB} \parallel \overline{DE}$
- B. $\overline{AB} \perp \overline{BE}$
- C. $\overline{AC} \cong \overline{CD}$
- D. $\angle ACB \cong \angle ECD$

Answer Choice Rationale

- A. Correct answer
- B. In order to prove that the two triangles are similar, $\overline{BE} \perp \overline{DE}$ would also have to be known. These two line segments are not congruent. The two line segments do not have to be congruent to prove that the two triangles are similar.
- C. These two angles are congruent, but this fact does not prove that the two triangles are similar.

ItemID A2K.1019190
 Correct A
 Standard(s) MA.9-12.MA.912.G.4.6

2. In the diagram, $\triangle ACB \cong \triangle DBC$.



Which other triangles can be proved congruent?

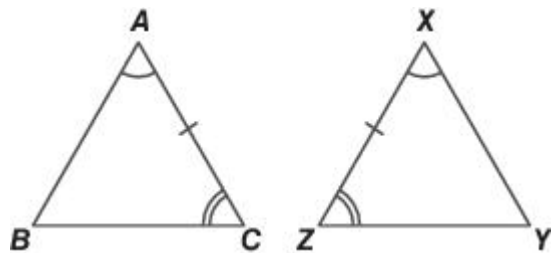
- A. $\triangle ADE \cong \triangle BCE$
- B. $\triangle ADE \cong \triangle CBE$
- C. $\triangle ABE \cong \triangle CDE$
- D. $\triangle ABE \cong \triangle DCE$

Answer Choice Rationale

- A. These triangles are not the same size, and so are not congruent.
- B. These triangles are not the same shape, and so are not congruent.
- C. This answer uses the correct vertices, but in the wrong order.
- D. Correct answer

ItemID A2K.1020018
 Correct D
 Standard(s) MA.9-12.MA.912.G.4.6

3. Given: $\triangle ABC$ and $\triangle XYZ$



Which pair of relationships between $\triangle ABC$ and $\triangle XYZ$ is correct?

- A. $\angle A \cong \angle Y$ and $\overline{AB} \cong \overline{XY}$
- B. $\overline{AB} \cong \overline{XZ}$ and $\overline{BC} \cong \overline{YX}$
- C. $\angle A \cong \angle X$ and $\triangle ABC \cong \triangle XYZ$
- D. $\triangle ABC \cong \triangle XYZ$ and $\overline{AC} \cong \overline{ZY}$

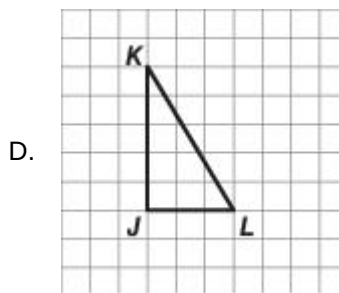
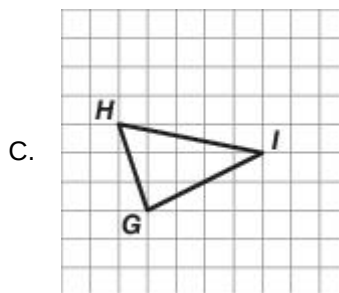
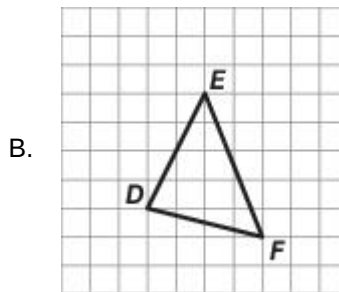
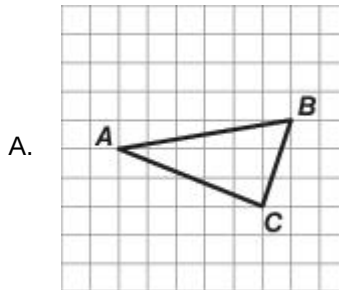
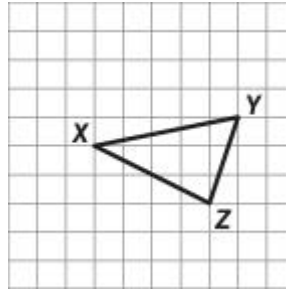
Answer Choice Rationale

Go on to the next page »

- A. This answer has a correct relationship for the segments, but not the angles.
- B. This answer confuses the corresponding line segments of the triangles.
- C. Correct answer.
- D. This answer has a correct relationship for the triangles, but not the segments. This answer mistakes the sides of the triangle that are corresponding.

ItemID A2K.1016077
 Correct C
 Standard(s) MA.9-12.MA.912.G.4.6

4. Which diagram shows a triangle drawn so that it is congruent to $\triangle XYZ$?



Answer Choice Rationale

- A. This triangle is similar to triangle XYZ, but since it is a different size, it is not congruent.

Go on to the next page »

- This triangle has different side lengths than triangle XYZ , so it is not the same shape. Since congruent figures have the same size and shape, these figures are not congruent.
- B. Correct answer
- C. This triangle has a different size and shape than triangle XYZ , so it cannot be congruent.

ItemID A2K.1103322
 Correct C
 Standard(s) MA.9-12.MA.912.G.4.6

5. Given $\triangle ABC$ and $\triangle DEF$, and that $\overline{AC} \cong \overline{DF}$, $\overline{AB} \cong \overline{DE}$, and $\overline{BC} \cong \overline{EF}$, which postulate BEST describes how we know the two triangles are congruent?
- A. AAA
- B. AAS
- C. SAS
- D. SSS

Answer Choice Rationale

- None of the angles are provided in this sketch, plus AAA only proves similarity; it does not prove congruence.
- A. While AAS is a legitimate way to prove congruency, it does not apply to this situation.
- B. Although SAS is one way to prove that two triangles are congruent, it does not apply to this situation, because none of the angles are known.
- C. Correct answer.

ItemID A2K.1226064
 Correct D
 Standard(s) MA.9-12.MA.912.G.4.6