

Think and Click: Similarity Postulates

Directions: Answer the following questions.

1. What similarity postulate can you use to say that the following two triangles are similar? Write a statement about their similarity. Triangle with right angle L, angle F with measure 25 degrees and angle B with no measure given. Triangle with right angle Q, angle M with measure 65 degrees and angle G with no measure given.

- A. AA Similarity Postulate, triangle LBF is similar to triangle GMQ
- B. SAS Similarity Postulate, triangle LBF is similar to triangle GMQ
- C. AA Similarity Postulate, triangle LBF is similar to triangle QMG
- D. SAS Similarity Postulate, triangle LBF is similar to triangle QMG

2. Is a triangle with side lengths 14, 21 and 28 similar to a triangle with side lengths 12, 16, 8? Why or why not?

- A. Yes, the SAS Similarity Postulate
- B. Yes, the SSS Similarity Postulate.
- C. No, the corresponding sides are not proportionate.
- D. No, no angle measures are given.

3. Are the following triangles similar? The first triangle has side lengths 18 and 15 and the second triangle has lengths 30 and 25.

- A. Yes, by the SSS Similarity Postulate.
- B. Yes, by the SAS Similarity Postulate.
- C. Yes, by the AA Similarity Postulate.
- D. No, the triangles may not be similar.

4. Are two equiangular triangles similar?

- A. Yes, by the AA Similarity Postulate.
- B. Yes, by the ASA Similarity Postulate
- C. No, the triangles might be different sizes.
- D. No, we do not know anything about the side lengths.

Answers:

1. C

@ In both triangles you can calculate the third angle. Corresponding angles should be in the same order.

2. B

@ Each pair of corresponding sides are proportionate, (the ratios are all equal to 1.75).

3. D

@ Although the two pairs of sides given are proportionate, all three pairs are needed to use the SSS Similarity Postulate.

4. A

@ Since all angles in an equiangular triangle are 60 degrees, they are equal to all the angles in all equiangular triangles. Therefore, the AA similarity Postulate can be used.