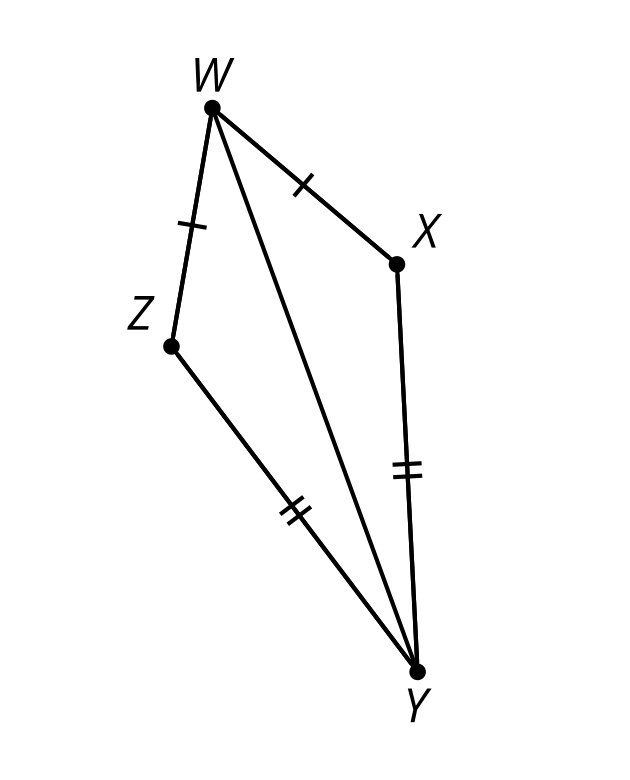
### Lesson 11 Practice Problems

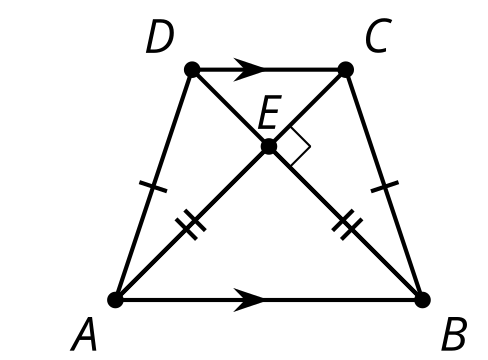
1. Which of the following criteria *always* proves triangles congruent? Select **all** that apply.
   1. 3 congruent angles
   2. 3 congruent sides
   3. Corresponding congruent Side-Angle-Side
   4. Corresponding congruent Side-Side-Angle
   5. Corresponding congruent Angle-Side-Angle
2. Here are some measurements for triangle  and triangle :
   * Angle  and angle  are both 30°
   * and both measure 6 units
   * and both measure 4 units

* Lin thinks thinks these triangles must be congruent. Priya says she knows they might not be congruent. Construct 2 triangles with the given measurements that aren't congruent. Explain why triangles with 3 congruent parts aren't necessarily congruent.

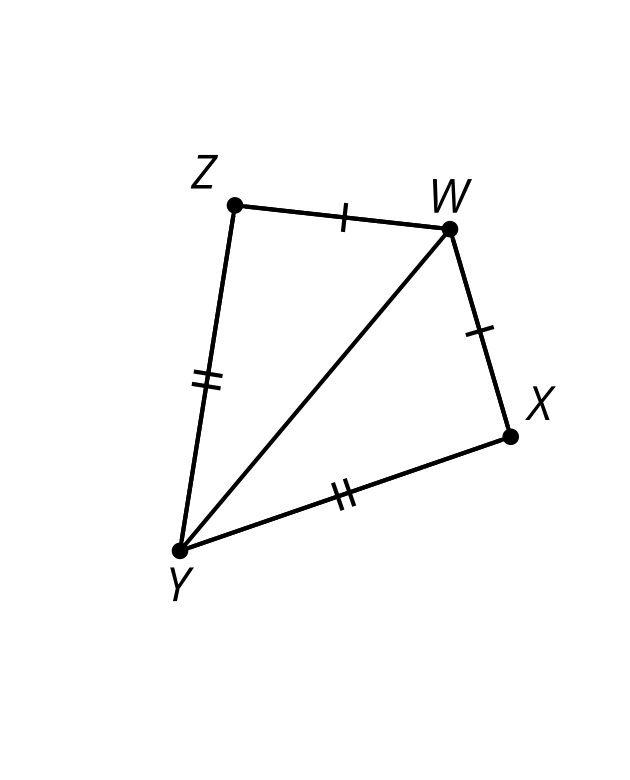
1. Jada states that diagonal bisects angles and . Is she correct? Explain your reasoning,

* 
* (From Unit 2, Lesson 9.)

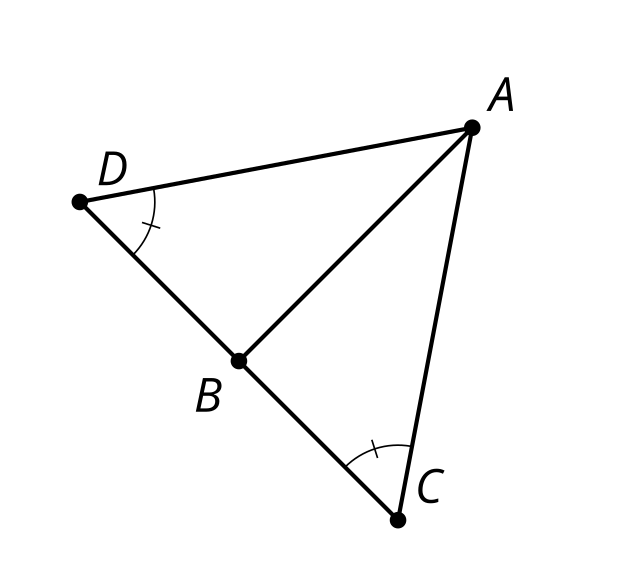
1. Select **all** true statements based on the diagram.

* 
  1. Angle is congruent to angle .
  2. Angle is congruent to angle .
  3. Segment is congruent to segment .
  4. Segment is congruent to segment .
  5. Line is parallel to line .
  6. Line is parallel to line .
* (From Unit 2, Lesson 10.)

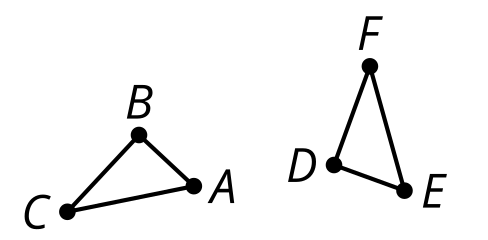
1. is a kite. Angle has a measure of 94 degrees and angle has a measure of 112 degrees. Find the measure of angle .

* 
* (From Unit 2, Lesson 9.)

1. Andre is thinking through a proof using a reflection to show that a triangle is isosceles given that its base angles are congruent. Complete the missing information for his proof.

* 
* Construct such that is the perpendicular bisector of segment . We know angle  is congruent to .  is congruent to  since is the perpendicular bisector of .  Angle  is congruent to angle  because they are both right angles. Triangle  is congruent to triangle  because of the  Triangle Congruence Theorem.  is congruent to  because they are corresponding parts of congruent triangles. Therefore, triangle  is an isosceles triangle.
* (From Unit 2, Lesson 8.)

1. The triangles are congruent. Which sequence of rigid motions takes triangle onto triangle ?

* 
  1. Translate using directed line segment . Rotate using as the center so that coincides with . Reflect across line .
  2. Translate using directed line segment . Rotate using as the center so that coincides with . Reflect across line .
  3. Translate using directed line segment . Rotate using as the center so that coincides with . Reflect across line .
  4. Translate using directed line segment . Rotate using as the center so that coincides with . Reflect across line .
* (From Unit 2, Lesson 3.)



© CC BY 2019 by Illustrative Mathematics®