Lesson 11 Practice Problems

1. Which of the following criteria *always* proves triangles congruent? Select **all** that apply.
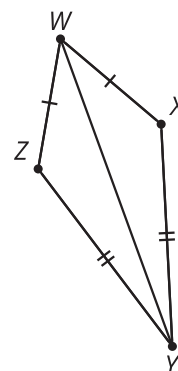
   A. 3 congruent angles

   B. 3 congruent sides

   C. Corresponding congruent Side-Angle-Side

   D. Corresponding congruent Side-Side-Angle

   E. Corresponding congruent Angle-Side-Angle

2. Here are some measurements for triangle ABC and triangle XYZ:

   ○ Angle ABC and angle XYZ are both 30°
   ○ BC and YZ both measure 6 units
   ○ CA and ZX 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.

3. Jada states that diagonal WY bisects angles ZWX and ZYX. Is she correct? Explain your reasoning,
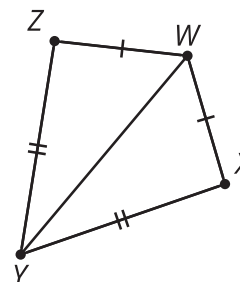

   (From Unit 2, Lesson 9.)

4. Select **all** true statements based on the diagram.
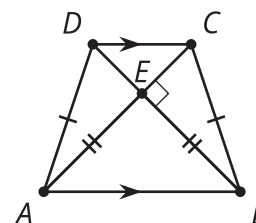
A. Angle CBE is congruent to angle DAE.

B. Angle CEB is congruent to angle DEA.

C. Segment DA is congruent to segment CB.

D. Segment DC is congruent to segment AB.

E. Line DC is parallel to line AB.

F. Line DA is parallel to line CB.

(From Unit 2, Lesson 10.)

5. $WXYZ$ is a kite. Angle WXY has a measure of 94 degrees and angle ZWX has a measure of 112 degrees. Find the measure of angle ZYW.
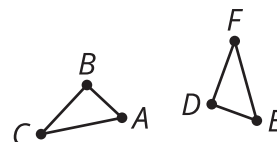

(From Unit 2, Lesson 9.)

6. 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.
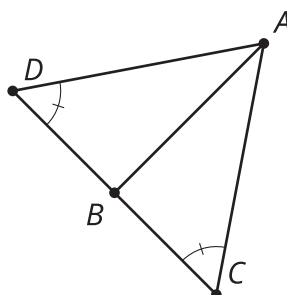
Construct AB such that AB is the perpendicular bisector of segment CD. We know angle ADB is congruent to _____1_____. DB is congruent to _____2_____ since AB is the perpendicular bisector of CD. Angle _____3_____ is congruent to angle _____4_____ because they are both right angles. Triangle ABC is congruent to triangle _____5_____ because of the _____6_____ Triangle Congruence Theorem. AD is congruent to _____7_____ because they are corresponding parts of congruent triangles. Therefore, triangle ADC is an isosceles triangle.

(From Unit 2, Lesson 8.)

7. The triangles are congruent. Which sequence of rigid motions takes triangle DEF onto triangle BAC?

   A. Translate DEF using directed line segment EA. Rotate $D'E'F'$ using A as the center so that D' coincides with C. Reflect $D''E''F''$ across line AC.

   B. Translate DEF using directed line segment EA. Rotate $D'E'F'$ using A as the center so that D' coincides with C. Reflect $D''E''F''$ across line AB.

   C. Translate DEF using directed line segment EA. Rotate $D'E'F'$ using A as the center so that D' coincides with B. Reflect $D''E''F''$ across line AC.

   D. Translate DEF using directed line segment EA. Rotate $D'E'F'$ using A as the center so that D' coincides with B. Reflect $D''E''F''$ across line AB.

(From Unit 2, Lesson 3.)