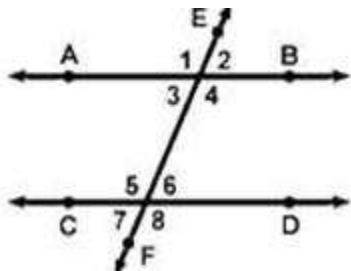


Waterbury Public Schools Geometry Unit 2 Assessment Items

Item Type: Constructed Response

Using the sketch A below with two parallel lines and a transversal, identify the special angle pairs and justify your answers.



Sketch A

Item Type: Selected Response

Given that Line AB is parallel to Line CD, a student reasons that Angle 3 is congruent to Angle 6. Why? (Select all answers that apply.)

- A) The student reasons that consecutive interior angles are congruent.
- B) The student reasons that vertical angles are congruent.
- C) The student reasons that alternate interior angles are congruent.
- D) The student reasons that corresponding angles are congruent.

Using the sketch A above; which of the following angles are congruent to Angle 1? (Select all answers that apply.)

- A) Angle 4
- B) Angle 5
- C) Angle 6
- D) Angle 7
- E) Angle 8

Item Type: Constructed Response

Explain why Angle 2 in sketch A is congruent to Angle 3. Tell which other angles are congruent to Angles 2 & 3, and why?

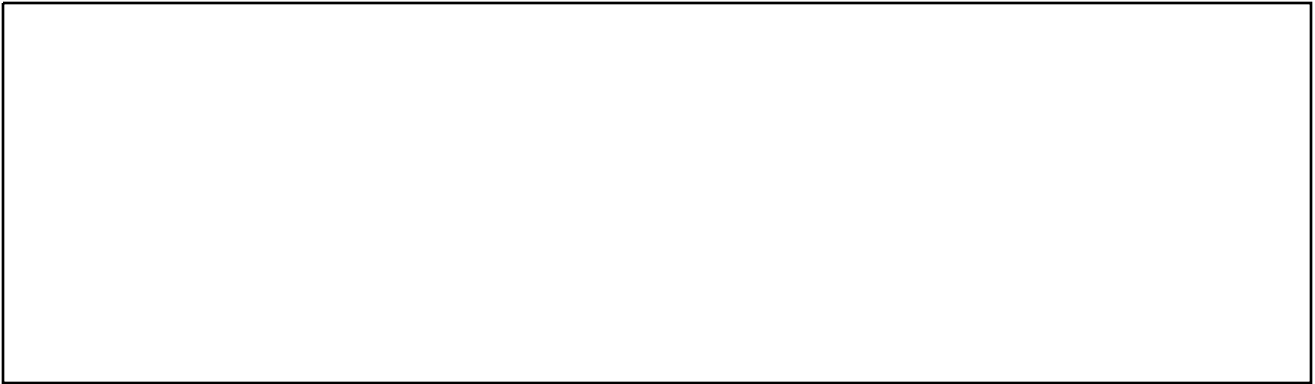
Item Type: Constructed Response

Identify a pair of supplementary angles in sketch A that form a linear pair. Name another pair of supplementary angles that are not a linear pair. Explain why each pair is supplementary.

Waterbury Public Schools Geometry Unit 2 Assessment Items

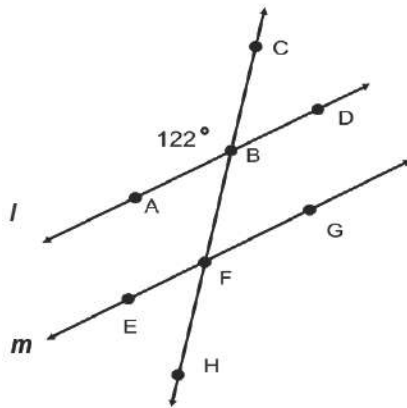
Item Type: Extended Task

- Draw Line AB and Line CD so they are parallel in the box below. Create a transversal Line EF that intersects AB and CD and E and F, respectively.



Item Type: Constructed Response

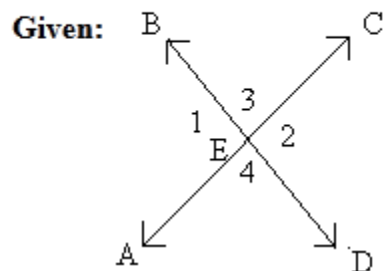
Given two parallel lines and a transversal, solve for missing angle measures.



Item Type: Constructed Response

Prove the vertical angles theorem, alternate interior angles theorem using a paragraph or two column proof.

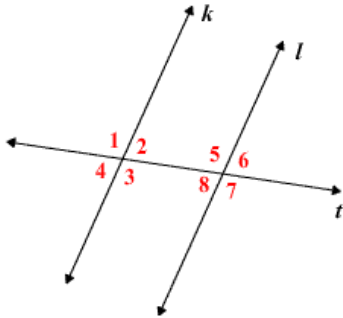
Vertical Angle Theorem: If two angles are vertical angles, then they have equal measures.



Waterbury Public Schools Geometry Unit 2 Assessment Items

The **Alternate Interior Angles Theorem** states that, when two parallel lines are cut by a [transversal](#), the resulting [alternate interior angles](#) are [congruent](#).

Given:

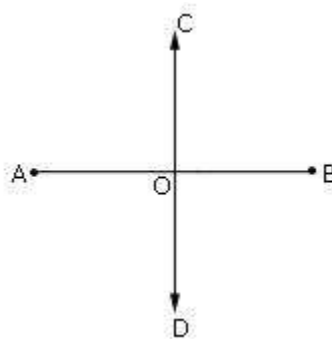


Item Type: Constructed Response

Solve for lengths of segments on a perpendicular bisector.

Solved Example on Perpendicular Bisector

AB is a line segment of length 12 cm. CD is the perpendicular bisector of AB. Find the length of AO and OB.



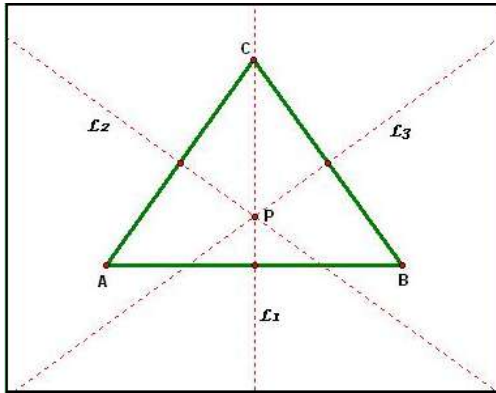
Waterbury Public Schools Geometry Unit 2 Assessment Items

Item Type: Constructed Response

Prove the perpendicular bisector theorem using a paragraph or two column proof.

The Perpendicular bisectors of the sides of a triangle are concurrent at a point that is equidistant from the vertices of the triangle.

Given: Triangle ABC with l_1 , l_2 , and l_3 the perpendicular bisectors of AB, AC and CB



Prove:

- a: l_1, l_2 , and l_3 are concurrent at point P.
- b: P is equidistant from A, B, and C.