

Unit 1 Lesson 20: Transformations, Transversals, and Proof

1 Math Talk: Angle Relationships (Warm up)

Student Task Statement

Lines ℓ and m are parallel. Mentally evaluate the measure x in each figure.

Figure A

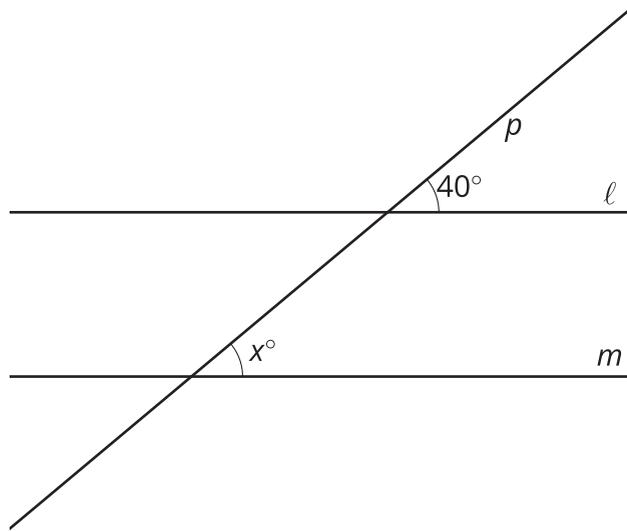


Figure B

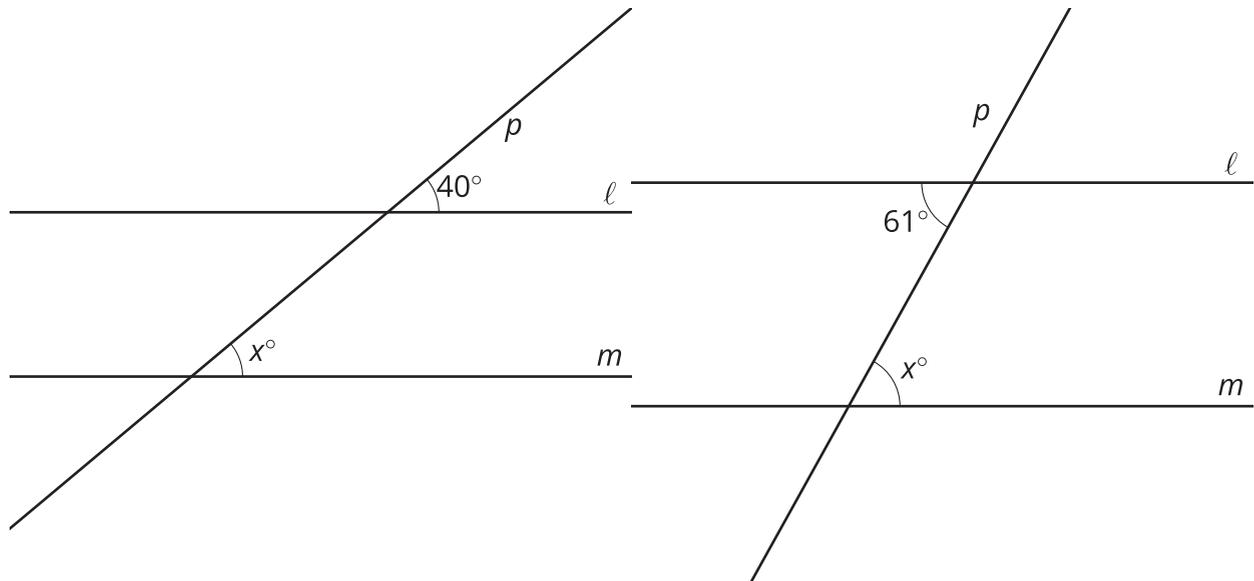


Figure C

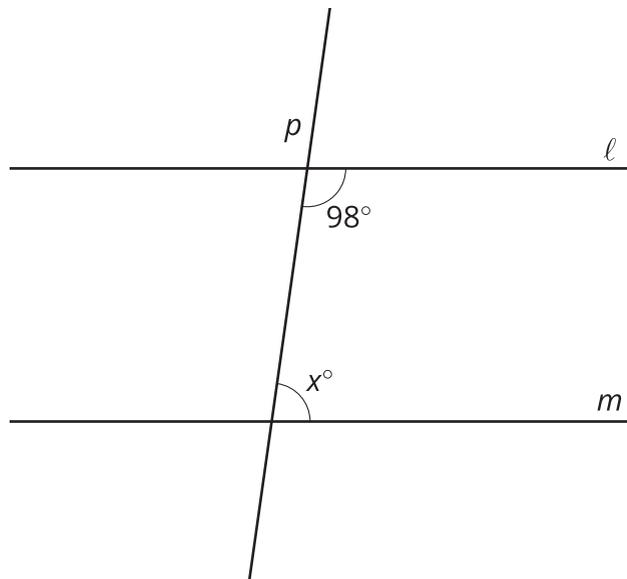
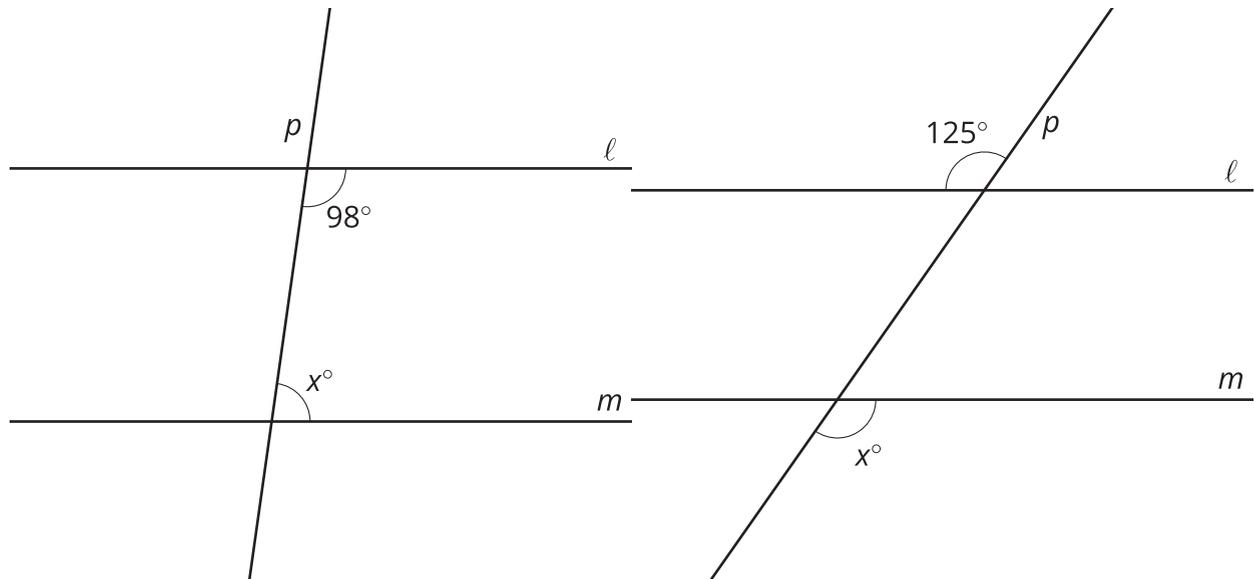


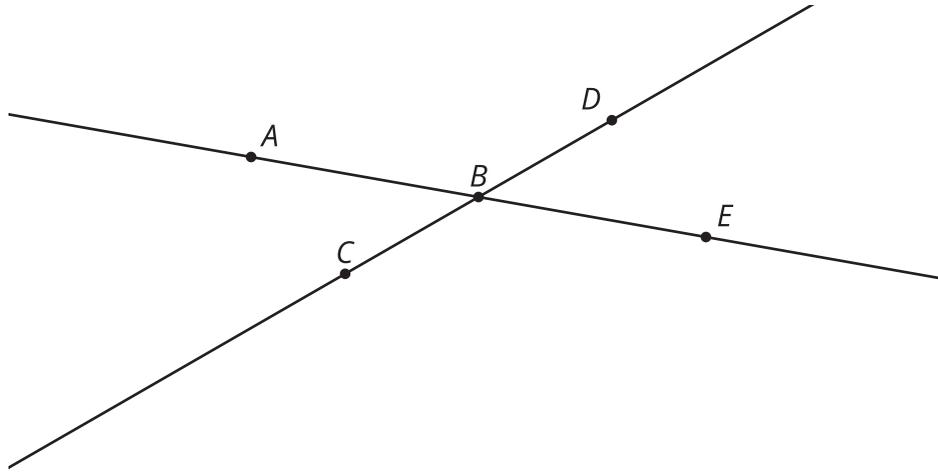
Figure D



2 Make a Mark? Give a Reason.

Student Task Statement

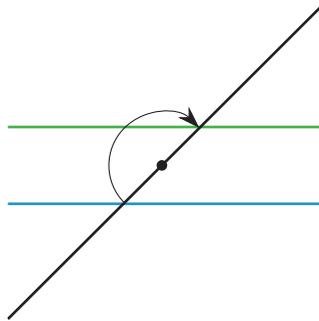
Here are intersecting lines AE and CD :



1. Translate lines AE and CD by the directed line segment from B to C . Label the images of A, B, C, D, E as A', B', C', D', E' .
2. What is true about lines AE and $A'E'$? Explain your reasoning.
3. Take turns with your partner to identify congruent angles.
 - a. For each pair of congruent angles that you find, explain to your partner how you know the angles are congruent.
 - b. For each match that your partner finds, listen carefully to their explanation. If you disagree, discuss your thinking and work to reach an agreement.

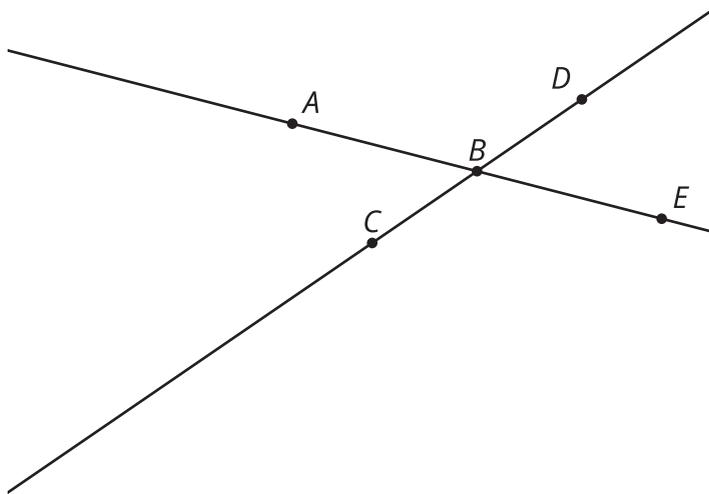
3 An Alternate Explanation

Images for Launch



Student Task Statement

Here are intersecting lines AE and CD :



1. Rotate line AE by 180 degrees around point C . Label the images of A, B, C, D, E as A', B', C', D', E' .
2. What is true about lines AB and $A'B'$? Explain your reasoning.
3. Take turns with your partner to identify congruent angles.
 - a. For each pair of congruent angles that you find, explain to your partner how you know the angles are congruent.
 - b. For each match that your partner finds, listen carefully to their explanation. If you disagree, discuss your thinking and work to reach an agreement.

Images for Activity Synthesis

