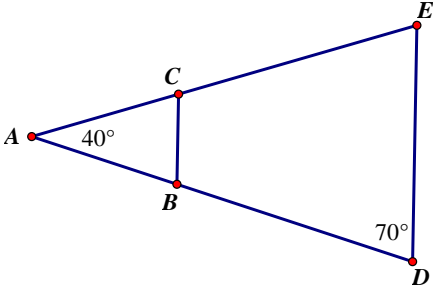
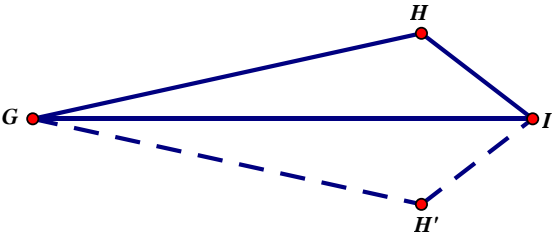
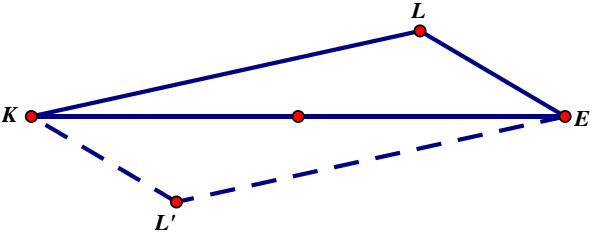
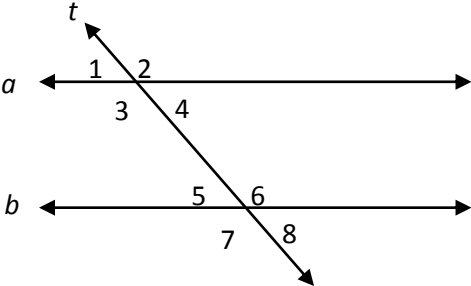
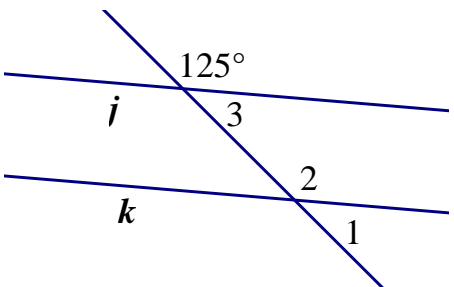


TARGET 3A: UNDERSTANDING DEDUCTIVE REASONING

| I can ... | Sample Question | Evidence of Understanding | What level is your understanding? 4=complete, 3=substantial 2=developing, 1=minimal |
|--|--|---------------------------|---|
| 1. I can use deductive reasoning to verify and explain theorems. (<i>Not tested</i>) | A. "The sum of the interior angles of a triangle is 180° ." Use deductive reasoning to verify/explain this theorem. B. "Alternate interior angles are equal when formed by parallel lines and a transversal." Use deductive reasoning to verify/explain this theorem. | | |
| 2. I can use deductive reasoning to verify and explain conjectures or geometric statements | In the diagram, $AB = AC$, $m\angle D = 70^\circ$, and $m\angle A = 40^\circ$. Sam thinks that $BC \parallel DE$. Explain why he is correct. <div style="text-align: center; margin-top: 20px;">  </div> | | |

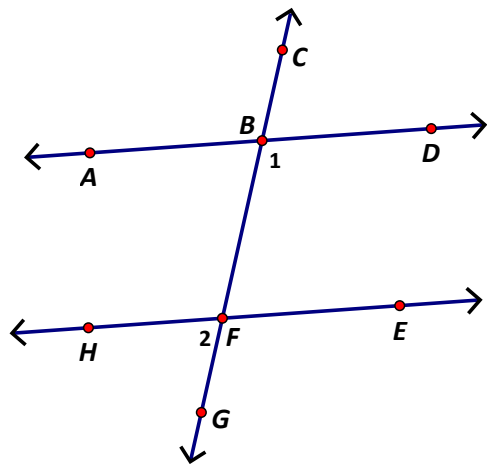
| | | | |
|--|---|--|--|
| <p>3. I can use transformations to justify the truth of a conjecture.</p> | <p>Explain how you know $GHIH'$ forms a kite when the scalene triangle GHI is reflected across the longest side</p>  <p>Explain how you know $KLEL'$ forms a parallelogram when the scalene triangle KLE is rotated 180° around the midpoint of the longest side</p>  | | |
| <p>4. I can explain the role of definitions, undefined terms, postulates (axioms), and theorems.</p> | <p>Explain the similarities and differences between definitions, undefined terms, postulates (axioms), and theorems and how they are used.</p> <p>Which of the following statements are true in geometry? Explain your thinking.</p> <ol style="list-style-type: none"> Every term can be defined and every true statement can be proved true. Every term can be defined, but it is necessary to assume certain statements are true. Some terms must be left undefined, but every true statement can be proved true. Some terms must be left undefined, and it is necessary to have some statements which are assumed true. | | |

TARGET 3B: UNDERSTANDING ANGLE RELATIONSHIPS WITH LINES

| I can ... | Sample Question | Sample Solution | What level is your understanding? 4=complete, 3=substantial 2=developing, 1=minimal |
|--|---|-----------------|---|
| <p>1. I can identify angle pairs (corresponding, alternate interior, alternate exterior, and same-side interior)</p> | <p>Given lines a and b are intersected by a transversal t, identify 2 sets of each of the following angle pairs</p>  <p>Corresponding _____ Alternate interior _____ Alternate exterior _____ Same-side interior _____</p> | | |
| <p>2. I can draw conclusions about angle pairs formed by parallel lines and a transversal.</p> | <p>Given line j is parallel to line k, what is the measure of angle 1?</p>  | | |

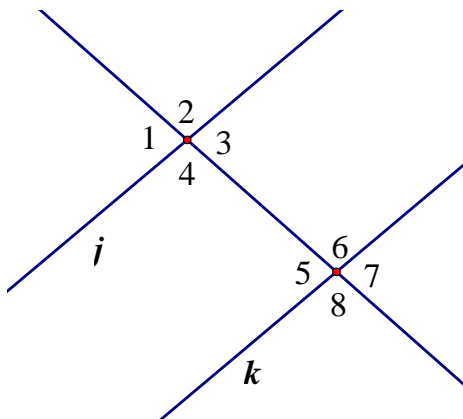
3. I can use angle relationships to determine when lines are parallel.

In the diagram below, \overleftrightarrow{AD} and \overleftrightarrow{HE} are cut by a transversal \overleftrightarrow{GC} . Angles 1 and 2 are supplementary. Can you conclude $\overleftrightarrow{AD} \parallel \overleftrightarrow{HE}$? If so, prove it; if not, find a counterexample.



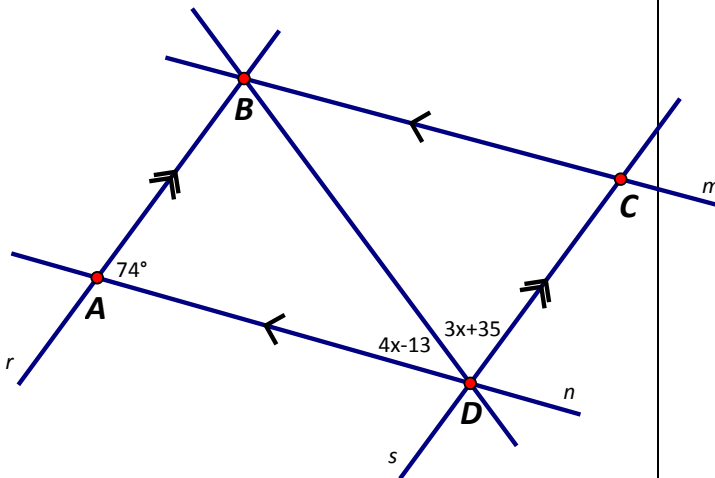
4. I can apply theorems about parallel and perpendicular lines.

Write at least four statements that can be used to justify that j is parallel to k .



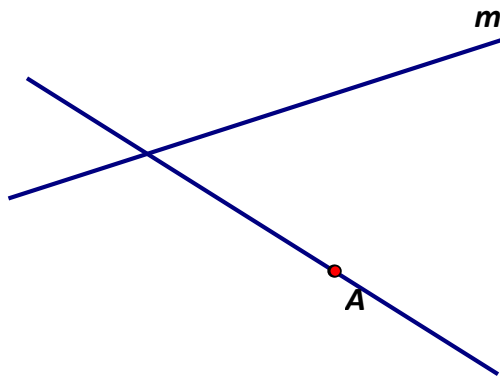
5. I can solve problems involving angles and parallel lines.

Use what you know about the angles formed by parallel lines and a transversal to find $m\angle BDA$.

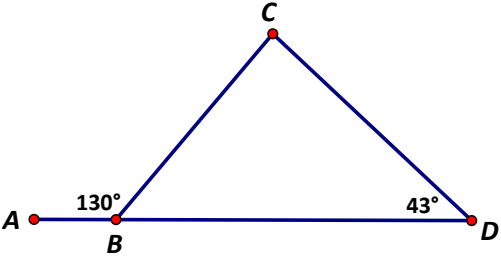
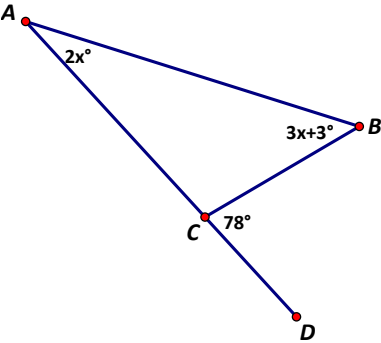


6. I can use and explain constructions related to parallel and perpendicular lines.

Construct a line parallel to line m through point A .



TARGET 3C: UNDERSTANDING ANGLES AND SEGMENTS IN A TRIANGLE

| I can ... | Sample Question | Sample Solution | What level is your understanding? 4=complete, 3=substantial 2=developing, 1=minimal |
|---|---|-----------------|---|
| <p>1. I can use the exterior angle theorem to solve problems.</p> | <p>Find $m\angle BCD$.</p>  <p>Find x and $m\angle ABC$.</p>  | | |
| <p>2. I can find the sums of the interior angles and exterior angles of a convex polygon.</p> | <p>a. Find the sum of the interior angles of a heptagon.</p> <p>b. Find the sum of the exterior angles of a heptagon.</p> <p>c. The sum of the interior angles of a figure is 1800. What type of polygon is this figure?</p> <p>d. Find the sum of the exterior angles of a kite.</p> | | |

3. I can find the measure of interior and exterior angles of a convex polygon.

Find the value of n .

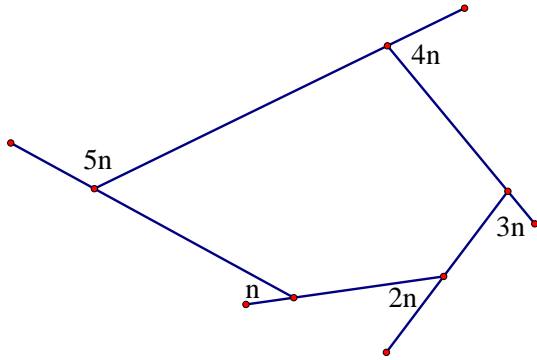
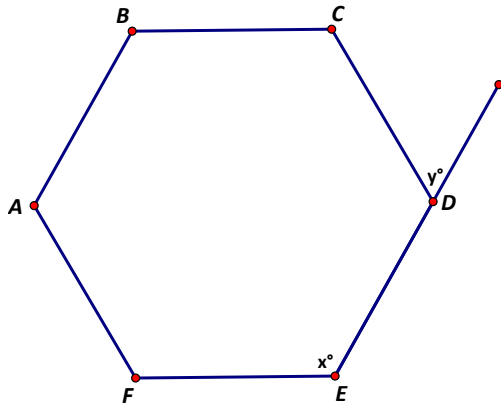
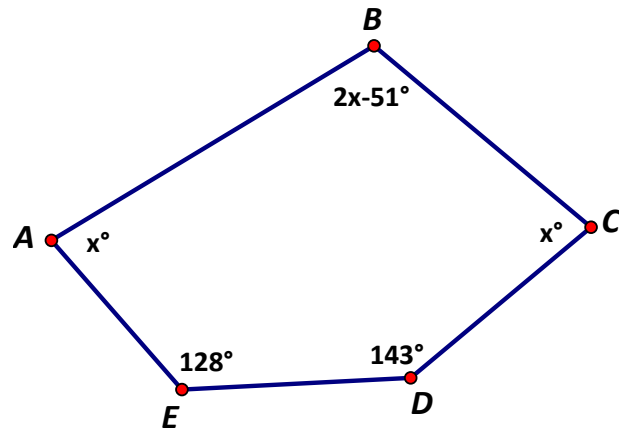


Figure ABCDEF is a regular hexagon. Find x and y .



Solve for x and the measure of all the unknown interior angles in the pentagon below.



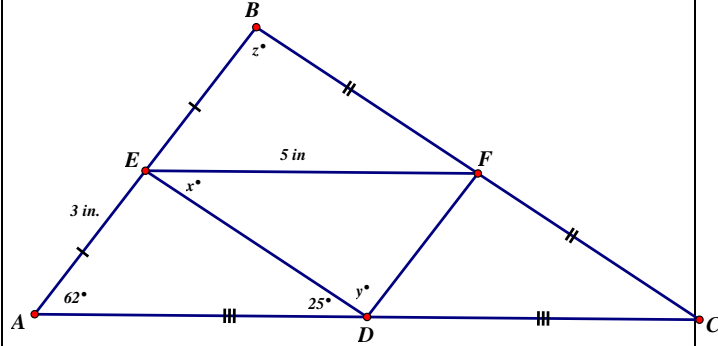
4. I can explain the characteristics of the midsegments, medians, and altitudes of a triangle.

A. Explain what you know about the midsegments of a triangle.

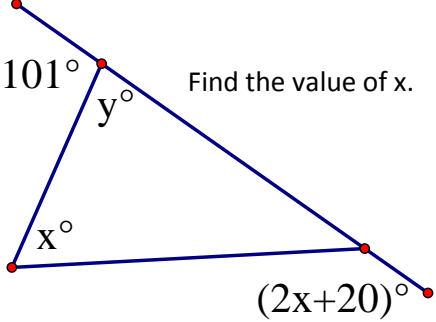
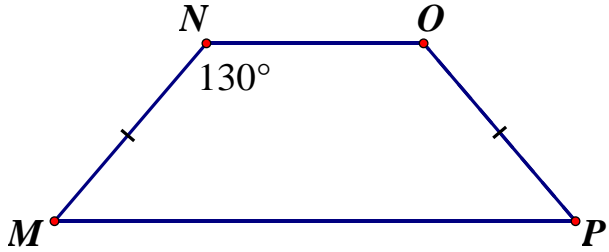
B. Explain what you know about the medians of a triangle.

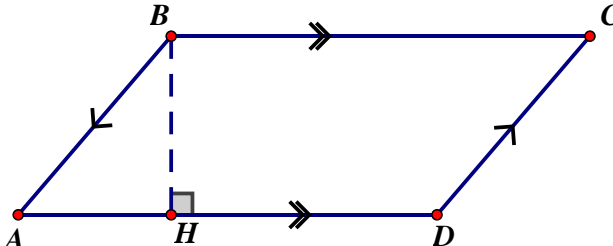
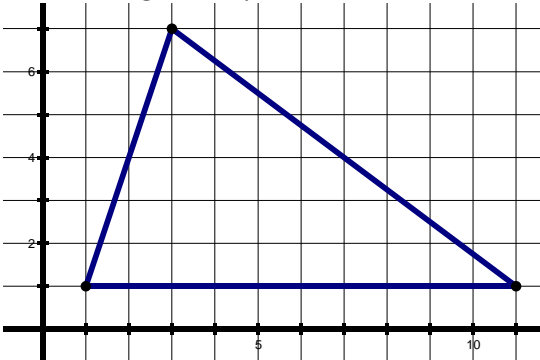
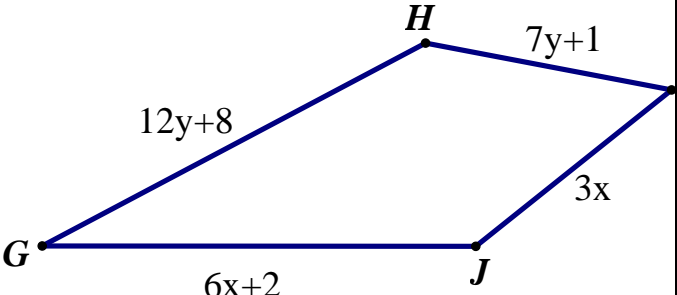
C. Explain what you know about the altitudes of a triangle.

D. Find the angles x , y , and z in the figure. Find the length of AD , AC , and BE , FD .



TARGET 3 CONNECTIONS

| I can ... | Sample Question | Sample Solutions | What level is your understanding? 4=complete, 3=substantial 2=developing, 1=minimal |
|--|---|------------------|---|
| <p>1. I can solve problems by reasoning with geometry and algebra.</p> | <p>Find the value of x.</p>  | | |
| <p>2. I can use transformations to solve problems</p> | <p>A. $MNOP$ is an isosceles trapezoid, with $\overline{NO} = \overline{MP}$. Use symmetry and other geometric ideas to find the measure of all the interior angles.</p>  | | |

| | | | |
|--|---|--|--|
| |  <p>B. Use transformations to explain why the formula for the area of a parallelogram is (base)x(height).</p> | | |
| <p>3. I can use coordinate geometry to solve problems.</p> | <p>Find the orthocenter of the triangle below using coordinate geometry.</p>  | | |
| <p>4. I can use systems of equations to find points on a coordinate plane.</p> | <p>Figure FHJ is a kite. $HI = IJ$ and $GH = GJ$. Solve for x and y.</p>  | | |

TARGET 3 COMMUNICATIONS — Students give evidence of clear communication by showing their thinking on each problem.