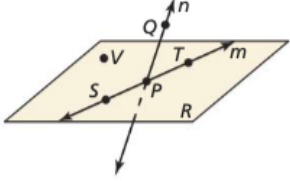
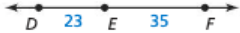

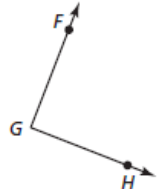


Integrated Math II - Essential Standards Document

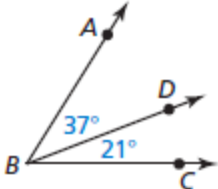
Collaborative Team: Hessong, Sachse, Thiemert

<p><b>What is the Learning Target or Essential Question?</b>  <i>In student/parent-friendly terms (i.e. "I can..."). There should be multiple targets from 1 standard. There could just be 1 essential question.</i></p>	<p><b>What Level of Thinking Does it Involve?</b>  <i>Depth of Knowledge (DOK 1-4)</i></p>	<p><b>How will you formatively assess this learning target or response to your essential question?</b>  <i>Provide or link to a <b>specific</b> formative assessment that shows how you're evaluating students' specific knowledge or skills.</i></p>
<p><b>Unit 1 – Basics of Geometry</b></p>		
<p>Name and learn the notations for points, lines, planes, segments, and rays</p>	<p>DOK 1</p>	<p>a. Give two other names for <math>\overleftrightarrow{PQ}</math> and plane <math>R</math>.                      b. Name three points that are collinear. Name four points that are coplanar.</p> <p><b>SOLUTION</b></p> <p>a. Other names for <math>\overleftrightarrow{PQ}</math> are <math>\overleftrightarrow{QP}</math> and line <math>n</math>. Other names for plane <math>R</math> are plane <math>SVT</math> and plane <math>PTV</math>.                      b. Points <math>S</math>, <math>P</math>, and <math>T</math> lie on the same line, so they are collinear. Points <math>S</math>, <math>P</math>, <math>T</math>, and <math>V</math> lie in the same plane, so they are coplanar.</p> 
<p>Use the Segment Addition Postulate to determine whether three points are collinear</p>	<p>DOK 2</p>	<p>a. Find <math>DF</math>. </p> <p>b. Find <math>GH</math>. </p>
<p>Use the Midpoint Formula to find the coordinates of midpoints of segments in the coordinate plane</p>	<p>DOK 2</p>	<p>a. The endpoints of <math>\overline{RS}</math> are <math>R(1, -3)</math> and <math>S(4, 2)</math>. Find the coordinates of the midpoint <math>M</math>.</p>
<p>Use the Distance Formula to find the distances between points in the coordinate plane</p>	<p>DOK 2</p>	<p>Your school is 4 miles east and 1 mile south of your apartment. A recycling center, where your class is going on a field trip, is 2 miles east and 3 miles north of your apartment. Estimate the distance between the recycling center and your school.</p>
<p>Name and learn the notations for angles</p>	<p>DOK 1</p>	<p>Select three names for the angle. </p>

Use the Angle Addition Postulate to find angle measures

DOK 2

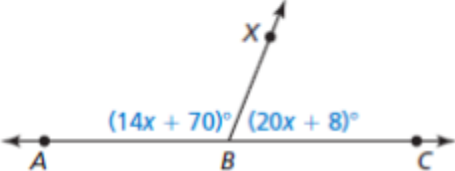
Find  $m\angle ABC$



Use angle relationships to solve problems

DOK 3

$\angle ABC$  is a straight angle.  
Find  $m\angle ABX$  and  $m\angle CBX$ .

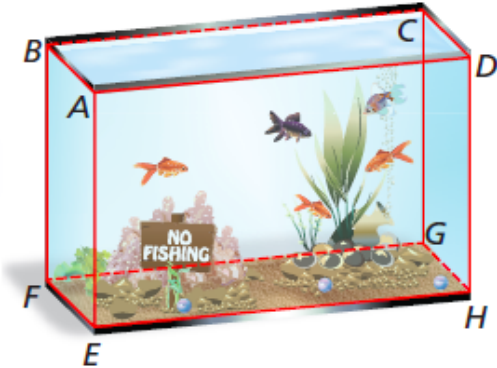


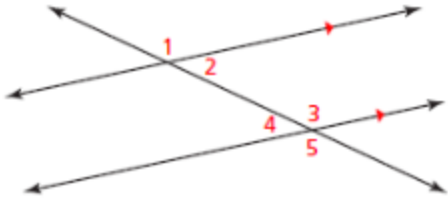
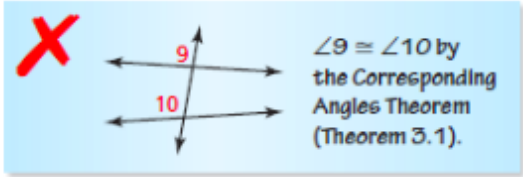
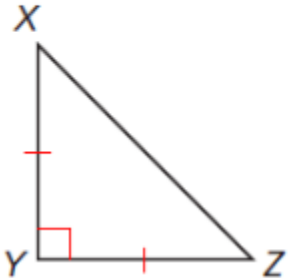
## Unit 2


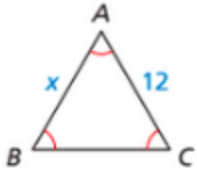
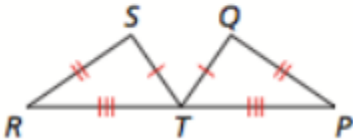
Identify parallel lines, perpendicular lines, skew lines, and parallel planes

DOK 1

Think of each segment in the diagram as part of a line. All the angles are right angles. Which plane(s) contain(s) point B and appear to be parallel to plane CDH?

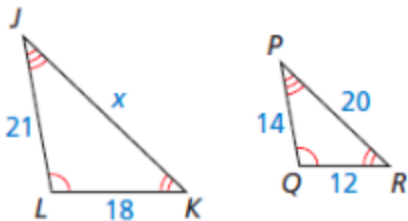


<p>Identify the pairs of angles formed when a transversal intersects two or more coplanar lines</p>	<p>DOK 1</p>	<p>Which pair of angle measures does <i>not</i> belong with the other three?</p> 
<p>Use properties of parallel lines to determine when pairs of angles are congruent</p>	<p>DOK 2</p>	<p><b>ERROR ANALYSIS</b> Describe and correct the error in the student's reasoning.</p> 
<p>Perform transformations on points and lines</p>	<p>DOK 2</p>	<p>Graph <math>\triangle JKL</math> and its image after a reflection in the <math>x</math>-axis.  <math>J(2, -4)</math>, <math>K(3, 7)</math>, <math>L(6, -1)</math></p>
<p>Classify triangles by sides and angles</p>	<p>DOK 1</p>	<p>Classify the triangle by its sides and by measuring its angles.</p> 

Find interior and exterior angle measures of triangles	DOK 2	
Use properties of isosceles and equilateral triangles to solve problems	DOK 2	
Identify and use corresponding parts of congruent triangles	DOK 3	<p>Identify all pairs of congruent corresponding parts. Then write another congruence statement for the polygons.</p> <p><math>GHJK \cong QRST</math></p>
<b>Unit 3</b>		
Use the Congruence Theorems to prove two triangles are congruent	DOK 4	<p>Decide whether the congruence statement is true. Explain your reasoning.</p> <p><math>\triangle RST \cong \triangle TQP</math></p> 
<b>Unit 4</b>		
Use similarity statements to find the scale factor from one polygon to another polygon	DOK 2	<p>Find the scale factor of the figures. Then list all pairs of congruent angles.</p> <p><math>\triangle ABC \sim \triangle LMN</math></p> <p>Write the ratios of the corresponding side lengths in a statement of proportionality.</p>

Find corresponding lengths in similar polygons using proportions

DOK 3

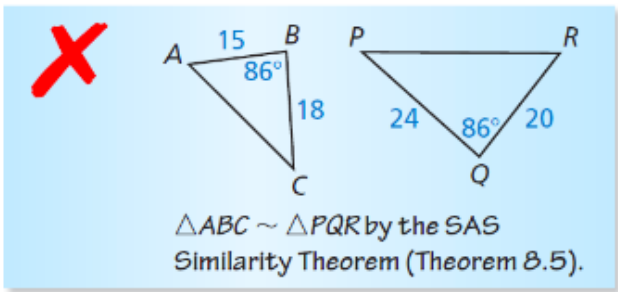


The polygons are similar. Find the value of  $x$ .

Use the Similarity Theorems to determine whether two triangles are similar

DOK 2

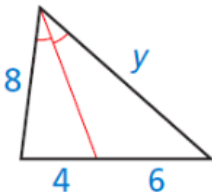
**ERROR ANALYSIS** Describe and correct the error in writing a similarity statement.



Use the Triangle Proportionality Theorem and its converse to find lengths of segments

DOK 3

Find the value of the variable.


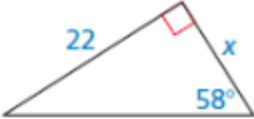


Find side lengths in 45-45-90 and 30-60-90 triangles

DOK 3



Unit 5

Use the Converse of the Pythagorean Theorem	DOK 2	 <p>Tell whether the triangle is a right triangle.</p>
Use the Trig Ratios to solve real-life problems	DOK 2	<p>Find the value of <math>x</math>. Round your answer to the nearest tenth.</p> 
<b>Unit 6</b>		
Find the direction, vertex, axis of symmetry, max/min values, domain, range, and solutions of a parabola for all forms of a quadratic equation	DOK 2	<p>Identify the graph of <math>y = (x - 2)(x + 2)</math> with its vertex, axis of symmetry and <math>x</math>-intercepts labeled. Describe the domain and range of the function.</p>
<b>Unit 7</b>		
Perform operations on polynomials	DOK 2	$(y^2 - 4y + 9) - (3y^2 - 6y - 9) = \square$
Factor polynomials	DOK 2 & 3	<p>Factor <math>8v^2 + 8v - 48</math>.</p>

Solve quadratic equations of the form $ax^2+bx+c=0$	DOK 2 & 3	<p><b>ERROR ANALYSIS</b> Describe and correct the error in solving the equation.</p> <div data-bbox="1159 224 1512 386" style="border: 1px solid black; padding: 5px;"><p><b>X</b></p><math display="block">3y^2 = 21y</math><math display="block">3y = 21</math><math display="block">y = 7</math><p>The root is <math>y = 7</math>.</p></div> <p>Solve the equation.</p>