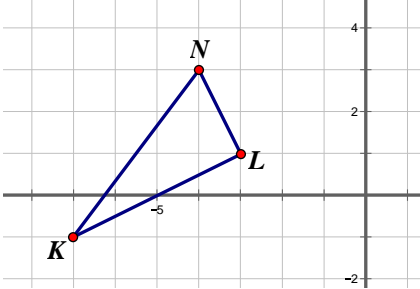


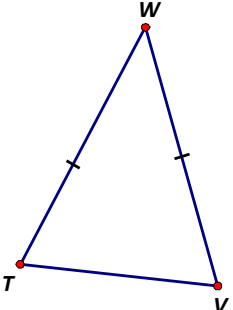
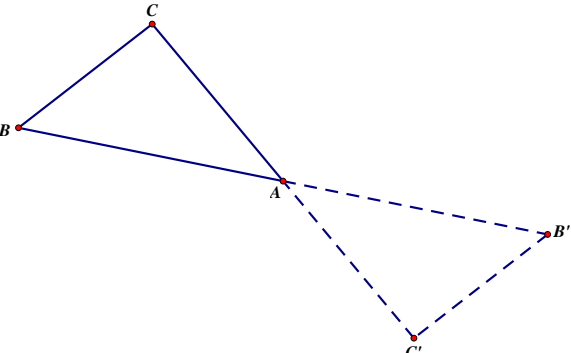
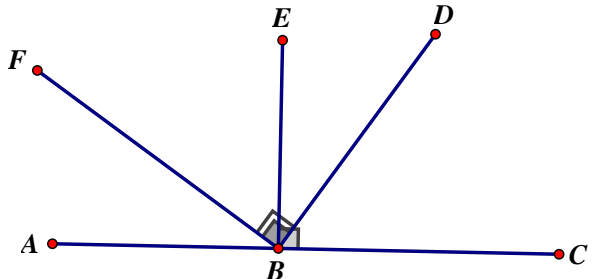
## TARGET 2C: UNDERSTANDING DEDUCTIVE REASONING

I can ...	Sample Question	Evidence of Understanding	What level is your understanding? 4 = complete 3 = substantial 2 = developing 1 = minimal
1. I can identify deductive reasoning	<p>a. In your own words, explain what deductive reasoning is.</p> <p>b. Which of the following are examples of deductive reasoning?</p> <ol style="list-style-type: none"> <li>1) Using properties of algebra and “doing the same thing to both sides” to solve the equation <math>5x - 2 = 3(x - 4)</math>.</li> <li>2) Solving the equation <math>5x - 2 = 3(x - 4)</math> by guess and check.</li> <li>3) PQRM is a rectangle. Therefore I can conclude that it has four right angles.</li> <li>4) Concluding that triangle KLN (shown below) is a right triangle “because it looks like it”.</li> </ol> 		

## TARGET 2C: UNDERSTANDING DEDUCTIVE REASONING

<p>2. I can draw conclusions using the Law of Detachment, the Law of Syllogism, and the Law of Contrapositive</p>	<p>a. Use the following true statement to answer the questions: “If <math>m</math> and <math>n</math> are odd integers, then the sum of <math>m</math> and <math>n</math> is an even integer.”</p> <ul style="list-style-type: none"><li>• <math>m=3</math> and <math>n=5</math>. What can you conclude about <math>m</math> and <math>n</math>?</li><li>• The sum of two numbers is 11. What can you conclude about the two numbers?</li></ul> <p>b. Use the following statements to answer the questions: “If a quadrilateral is a square, then it is a rectangle. If a quadrilateral is a rectangle, then it is a parallelogram.</p> <ul style="list-style-type: none"><li>• THPQ is a square. What can you conclude about it?</li></ul>		
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## TARGET 2C: UNDERSTANDING DEDUCTIVE REASONING

<p>3. I can use properties of rigid transformations to justify the truth of a conjecture</p>	<p>a. Debbie thinks the base angles of an isosceles triangle (<math>\angle T</math> and <math>\angle V</math>) are equal. Explain how she could use the properties of reflections to justify her thinking.</p>  <p>b. Susan rotates a triangle 180 degrees about point A. Explain how the resulting picture demonstrates that vertical angles are equal.</p> 		
<p>4. I can use deductive arguments to justify the truth of a conjecture</p>	 <p>a. In the diagram above, <math>\angle FBE = 90^\circ</math> and <math>\angle EBD = 90^\circ</math>. Explain why <math>\angle FBA</math> and <math>\angle DBC</math> must be complementary.</p>		