

Unit 4B – Similarity

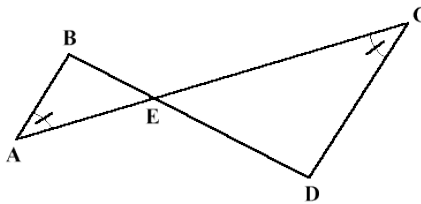
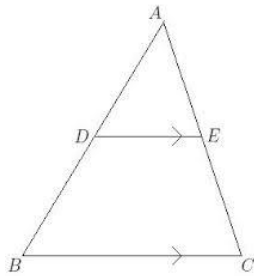
<p>What does the test look like?</p> <ul style="list-style-type: none"> • 5 Multiple Choice • 10 Short Answer • 3 Proofs <ul style="list-style-type: none"> ○ 2 have flow charts ○ 1 your choice (flow or t-chart) <p>The first few minutes of class will be open for review if specific questions are posed. You will then have the remaining class time to finish the test.</p>	<p>Topics on the test:</p> <ul style="list-style-type: none"> • Identifying corresponding parts (by mapping) and Solving. <ul style="list-style-type: none"> ○ Congruent Angles ○ Proportional Sides • Similarity Postulates • Midsegment • Transversals/Linear Pairs (Angle Relationships) • Exterior Angle Theorem
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Tips for Solving Proofs:

1. Use what is given and make your markings.
2. Notice what you have. Sides? Angles? Try to determine what postulates you may be using and look for the additional components (Vertical angles? Reflexive Angle?)
3. Once you find your postulate you have proved the triangles are similar!
4. Did you prove what you needed to? Was it just that the triangles are similar? Or was it that sides are proportional? Angles are congruent? Make sure you finish the proof! (If you are looking for proportional sides or congruent angles your justification or reasoning is the definition of similarity.)

Making Markings on our triangles:

<p>Given Ratios?? [Our sides (line segments) in fractions] <u>Look for the corresponding sides</u> and give them markings. In class we used circles, stars, squares, and hearts.</p>	
<p>Given Parallel lines?? <u>Look for angles!!</u></p>	
<p>Ex 1) If there is a triangle within a triangle you are looking for corresponding angles!</p> <p><E corresponds to <C</p> <p><D corresponds to <B</p> <p>Corresponding angles are congruent!</p> <p>[<A is Reflexive!]</p>	<p>Ex) If triangles are stacked on top of one another (or touching at one point) you are looking for - alternate interior angles.</p> <p><A and <C are alternate exterior.</p> <p><B and <D are alternate exterior!</p> <p>Alternate exterior angles are congruent!</p> <p>[<AEB and <CDE are vertical angles!]</p>
<p>Given Angles? Mark them at their respective locations.</p>	



Proportional sides and Scale Factor:

- Make sure you pay special attention the triangle similarity statement. This will help you match the correct sides.
- Look at what direction it states to find the scale factor.
 - If we go from a bigger shape to a smaller shape our scale factor should be a fraction less than 1.
 - If we go from a smaller shape to a bigger shape, our scale factor should be a fraction greater than 1.
 - Also, think “STARTED FROM THE BOTTOM, NOW WERE HERE.”
 - The pre-image side goes on the bottom of the fraction (denominator) and the image goes on the top of the fraction (the numerator.)

Similarity Postulates:

Angle – Angle Similarity (AA^{\sim})	Two angles in the triangle are congruent.
Side – Angle –Side Similarity (SAS^{\sim})	Two corresponding sides are proportional and the angles in between are congruent.
Side – Side – Side Similarity (SSS^{\sim})	All Corresponding sides are proportional to one another. Their ratios, or reduced fractions are equal.