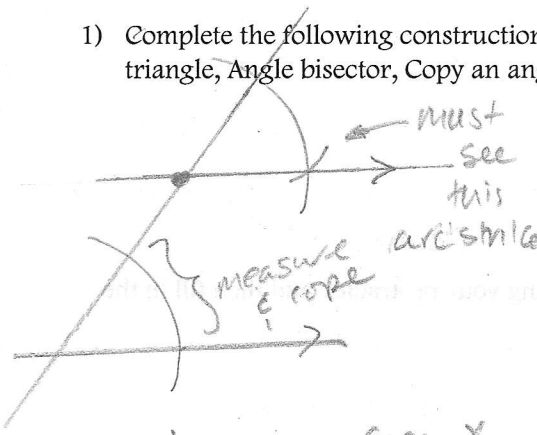
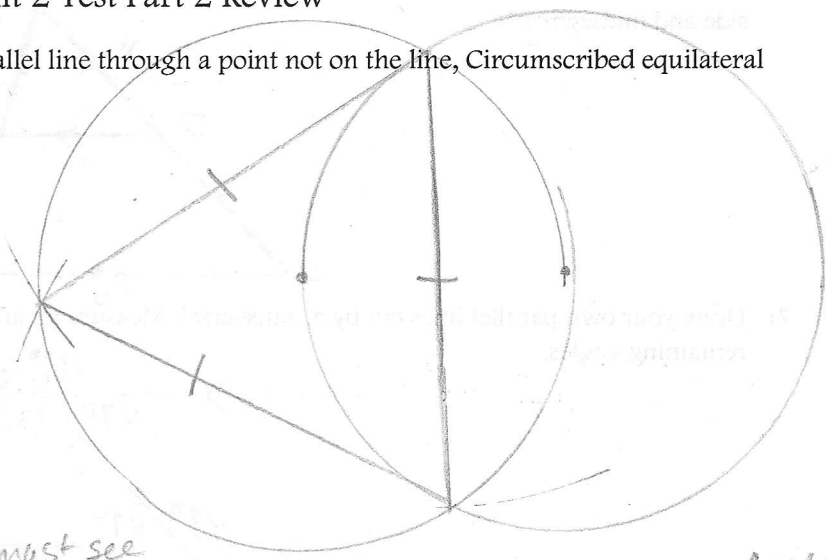
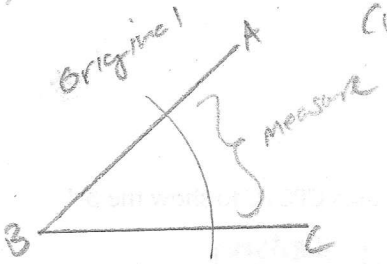
AL

Unit 2 Test Part 2 Review

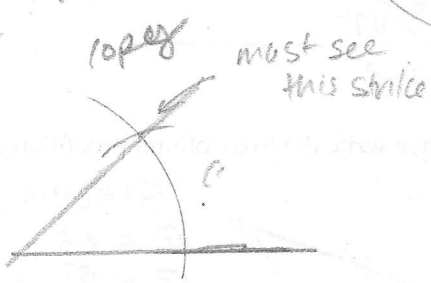
1) Complete the following constructions: Parallel line through a point not on the line, Circumscribed equilateral triangle, Angle bisector, Copy an angle

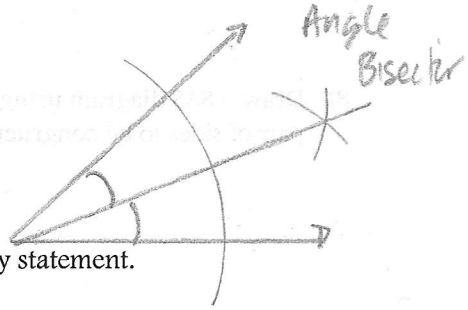




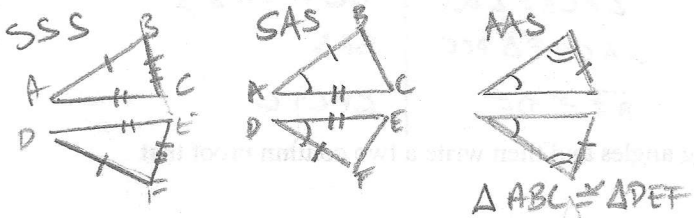


Copy ∠





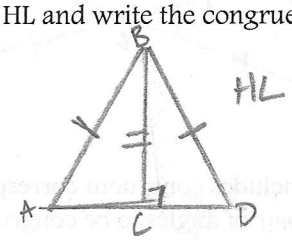
2) Draw your own examples of SSS, SAS, ASA, AAS and HL and write the congruency statement.



△ABC ≅ △DEF

△ABC ≅ △DEF

△ ABC ≅ △ DEF

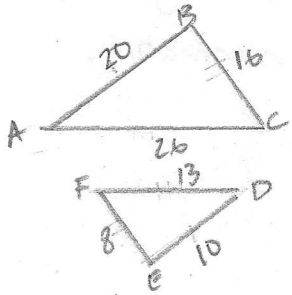


△ACB ≅ △DCB

WARNING! IF YOU TRY TO PROVE CONGRUENCY USING ADDITIONAL TOPICS SUCH AS PERPENDICULAR BISECTORS OF AN ISOSCELES RT TRIANGLE, ANGLE BISECTORS, ETC., YOU WILL HAVE TO WRITE OUT PROOF STEPS. VERTICAL ANGLES, AIA, AEA, CA, REFLEXIVE SIDES AND ANGLES ARE THE PRIMARY METHODS FOR PROVING CONGRUENCY. AGAIN, GOING OUTSIDE THESE PARAMETERS WILL REGQUIRE ADDITIONAL WRITTEN EXPLANATIONS THAT ARE KNOWN TO BE TRUE.

Remember with Triangle Similarity, SAS~ means that the congruent angle is included in between to sides that can be shown to be proportional. An inner segment that is parallel to a 3rd side in a triangle guarantees SSS~. Also, keep in mind the midsegment property ensures SSS~ proportionality.

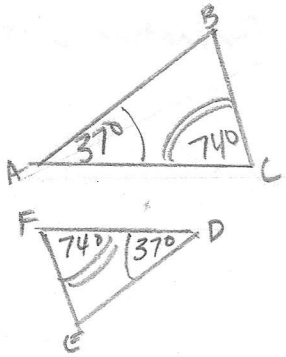
3) Draw a SSS~ example



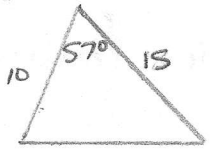
$\frac{20}{10} = \frac{16}{8} = \frac{26}{13}$

2/1

4) Draw a AA~ Example



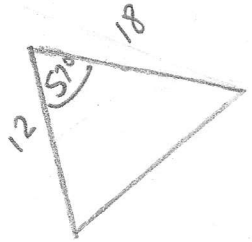
5) Draw a SAS~ Example



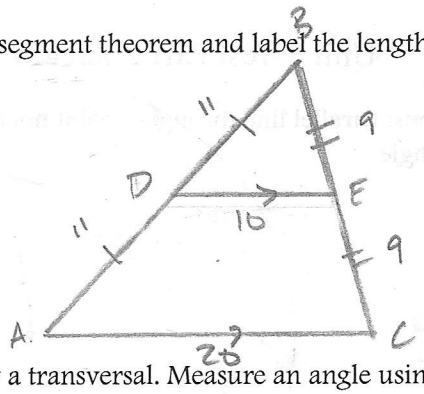
57° = 57°
included ∠

$\frac{18}{15} = \frac{12}{10}$

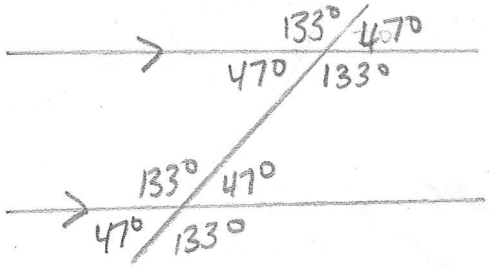
$\frac{6}{5}$



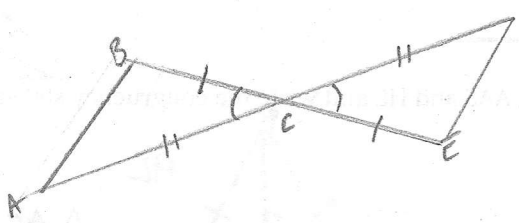
6) Draw your own example of the midsegment theorem and label the lengths of your bisected segments and parallel side and midsegment



7) Draw your own parallel lines cut by a transversal. Measure an angle using your protractor and then fill in the remaining angles.

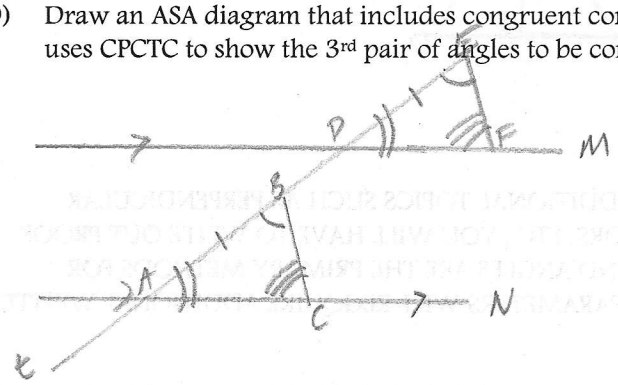


8) Draw a SAS diagram using Vertical Angles and then write the two-column proof that uses CPCTC to show the 3rd pair of sides to be congruent.



STATEMENT	REASON
$\overline{BC} \cong \overline{EC}$	Given
$\overline{AC} \cong \overline{DC}$	Given
$\angle ACB \cong \angle DCE$	Vertical $\angle$'s
$\triangle ACB \cong \triangle DCE$	SAS
$\overline{AB} \cong \overline{DE}$	CPCTC

9) Draw an ASA diagram that includes congruent corresponding angles and then write a two column proof that uses CPCTC to show the 3rd pair of angles to be congruent.



STATEMENT	REASON
$\overleftrightarrow{M} \parallel \overleftrightarrow{N}$	GIVEN
$\overleftrightarrow{t}$ transversal	Given
$\overline{AB} \cong \overline{DE}$	Given
$\angle ABC \cong DEF$	Given
$\angle BAC \cong \angle EDF$	Corresponding $\angle$'s
$\triangle ABC \cong \triangle DEF$	ASA
$\angle ACB \cong \angle DFE$	CPCTC

10) Explain why geometric proofs are important in mathematics.

Geometric proofs helps us build a better understanding of logic & combining written information with visual information.