**Unit 8 Review** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Part 1** Given $∆LEG≅∆ARM$, answer the following questions:

1. If $LE≅EG$ and $m<M$ is $43°$, what is $m<R$?
2. If $LE=12$ and $AM=5$ and $m<A=90°$, what is $EG?$
3. If $GE=3x-7$ and $AM=11x-18$ and $MR=2x+2$, what is $\sqrt{AM}$?

**Part 2** State the postulate that could be used to prove the triangles congruent.

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**Solve the following**

**Part 3** Definitions. Make sure you know the following:

* SSS Congruence Postulate
* SAS Congruence Postulate
* ASA Congruence Postulate
* AAS Congruence Theorem
* HL Congruence Theorem
* Isosceles Triangle Theorem
* Converse of Isosceles Triangle Theorem
* Perpendicular Bisector
* Angle Bisector
* Segment Bisector
* Reflexive Property of Congruence
* Transitive Property of Congruence
* Alternate Interior Angles Theorem
* Corresponding Angles Theorem
* SSS Similarity Theorem
* SAS Similarity Theorem
* Angle Angle Similarity Theorem
1. CPCTC – If two triangles are congruent, then their corresponding parts are \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Part 4** Proofs

G

Given $∆GAB$ with $\overbar{GS}$ $\overbar{AB}$, and $\overbar{GA}≅\overbar{GB}$.

Prove $\overbar{AS}≅\overbar{SB}$.

S

B

AT

Given

$$\overbar{AS}≅\overbar{SB}$$

$∆GAS$ and $∆BGS$ are right triangles

<ASG and <BSG are right angles

$$\overbar{GS}≅\overbar{GS}$$

 $\overbar{GS}$ $\overbar{AB}$