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|  | Topic/Objective: More Triangle Proofs |  |
| Essential Question: When given a congruence statement about two triangles how can you use CPCTC?  |
|  | Consider the figures below with $∆ABC ≅ ∆DEF.$List the congruency statements about these triangles.Now consider the following theorem.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Quick Write.**When given a congruence statement about two triangles, how can you use CPCTC?**Quick Write:**How can rigid motion(s) be used to determine congruence?By definition, two figures are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ if and only if there exists one, or more \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ which will map one figure onto the other.What rigid motion maps $∆POT$ onto $∆JAB$?Justify the use of the SSS Congruence Postulate to prove that $∆POT ≅∆JAB.$Find a rigid motion that will map $∆SEA$ onto $∆OPT.$1. Suppose that $m∠AVE=112.71^{0}, AV=6.4", $and $VE=7.28".$ Justify the use of the SAS Congruence Postulate to prove that $∆AVE ≅ ∆CHU$.
2. Suppose that your friend suggests a translation as the rigid motion that maps $∆AVE$ onto $∆CHU.$ Is your friend correct? Justify your answer.

Find a combination of rigid motions that will map $∆COP$ onto $∆PAT$ and determine if $∆COP ≅∆PAT.$**Your turn:****Use Triangle Congruence to find missing variables.**Find the values of x in order to prove that the two triangles are congruent by the SAS Congruence Postulate. Justify your work.Find the value of y in order to prove that the two triangles are congruent using the ASA Congruence Postulate. Justify your work.Find the values of x and y that prove the two triangles are congruent using the SSS Congruence Postulate.**Your turn:**1. Find the values of x and y that prove the two triangles are congruent using the AAS Congruence Theorem. Justify your work.

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| Summary: |