CPCTC, CASTC & CSSTP

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| When Triangles are Congruent : | | When Triangles are Similar : | |
| **CPCTC** | | **CASTC** | **CSSTP** |
| Sides & Angles | | Angles Only! | Sides Only! |
| , & | , & | |  |
| To solve  Pick the pair with you want (CPCTC)  Make them equal (Def. )  Plug in what you know (Subst.)  Simplify, if needed  Solve, if needed  (+/-/x/÷ Prop =) | To solve  Pick the pair with you want (CASTC)  Make them equal (Def. )  Plug in what you know (Subst.)  Combine like terms, if needed (Simp.)  Solve, if needed (+/-/x/÷ Prop =)  Plug in *x*, if needed (Subst.)  Simplify, if needed | | To solve  Pick two fractions to use:  the one with you want & the one that has both top and bottom  Make the fractions equal (CSSTP)  Plug in what you know (Subst.)  Cross multiply (Mult. Prop. =)  Divide, if needed (Div. Prop. =) |
|  | To solve  Pick the triangle you are going to use  Pick the angle(s) you will subst. (CASTC)  Make the angles equal (Def. )  Plug in what you know (Subst.)  Setup Triangle Sum Theorem  Plug in what you know (Subst.)  Combine like terms (Simp.)  Solve (+/-/x/÷ Prop =)  Plug in *x*, if needed (Subst.)  Simplify, if needed | |  |

For each problem, identify which property you must use (CPCTC, CASTC or CSSTP), then solve for the desired part.

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| 1.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | 2.  Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 3.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 4.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) |
| 5.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 6.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 7.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | |
| 8.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 9.  Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | | 10.  . Determine .  (Property: \_\_\_\_\_\_\_\_\_\_\_\_\_) | |

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| **Example:**  Determine . | **Example:**  Determine . |
| 11.  Determine . | 12.  Determine . |
| 13.  Determine . | 14.  Determine . |

*CPCTC, CASTC & CSSTP Answers*

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| 1. CSSTP; | 2. CPCTC; | 3. CASTC; | 4. CSSTP; |
| 5. CASTC; | 6. CSSTP; | 7. CPCTC; | 8. CSSTP; |
| 9. CPCTC; | 10. CSSTP; | 11. | 12. |
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