**Secondary Math 2 1.3 Homework Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_**

**Parallel Lines cut by a Transversal**

**Use the figure below for problems 1-2.**

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1. **Identify 2 pairs of angles that fit into each category.**

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| **Linear Pairs** | | **Vertical Angles** | | **Corresponding Angles** | |
| 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Circle one: Congruent OR Supplementary | | 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Circle one: Congruent OR Supplementary | | 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Circle one: Congruent OR Supplementary | |
| **Alternate Interior Angles** | **Alternate Exterior Angles** | | **Same Side Interior** | | **Same Side Exterior** |
| 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Congruent OR Supplementary | 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Congruent OR Supplementary | | 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Congruent OR Supplementary | | 1. \_\_\_\_\_ & \_\_\_\_\_  2. \_\_\_\_\_ & \_\_\_\_\_  Congruent OR Supplementary |

1. **Given find the measure of the following angles**

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|  |  |  |  |  |

1. **Find and State the theorems or postulate that *justify* your answers.**

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| --- | --- | --- | --- |
| a) |  | b) |  |

1. **Solve for x. State the theorems or postulates that *justify* your answers.**

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| --- | --- | --- | --- |
| a) |  | b) |  |

**Construct a proof for the following problems:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  | Given: prove that | |  |  | | --- | --- | | ***Statement*** | ***Reason*** | |  |  | |  |  | |  |  | |  |  | |

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|  | Given: and  Prove: . | |  |  | | --- | --- | | ***Statement*** | ***Reason*** | |  |  | |  |  | |  |  | |  |  | |

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|  | Given: and  Prove: . | |  |  | | --- | --- | | ***Statement*** | ***Reason*** | |  |  | |  |  | |  |  | |  |  | |

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|  | Given: and  Prove: are supplementary. | |  |  | | --- | --- | | ***Statement*** | ***Reason*** | |  |  | |  |  | |  |  | |  |  | |