**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** $m∠4=35° and m∠17=95°,$ **find the measure of the following angles**

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| --- | --- | --- | --- | --- |
| $$m∠2=$$ | $$m∠13=$$ | $$m∠7=$$ | $$m∠11=$$ | $$m∠16=$$ |

1. **Find** $m∠1$ **and** $m∠2. $**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: $l∥m,$ prove that $m∠2+m∠5=180°.$ |

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| ***Statement*** | ***Reason*** |
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|  | Given: $r∥s$ and $t∥u$Prove: $∠5≅∠9$. |

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| ***Statement*** | ***Reason*** |
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|  | Given: $r∥s$ and $t∥u$Prove: $∠1≅∠16$. |

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| ***Statement*** | ***Reason*** |
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|  | Given: $r∥s$ and $t∥u$Prove: $∠2 and ∠13$ are supplementary. |

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| ***Statement*** | ***Reason*** |
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