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| **OUR TURN** | **YOUR TURN** |
| **1.** | **Use this triangle to complete the statements and justifications below.** |  | **1.** | **Use this triangle to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | TL is parallel to BR. | Given |
| 2 | ∠ATL ≅ ∠\_\_\_\_\_\_∠ALT ≅ ∠\_\_\_\_\_\_ |  |
| 3 | ΔATL ~ Δ\_\_\_\_\_\_\_ |  |
| 4 | $$\frac{AB}{AT}=\frac{ }{ }$$ |  |
| 5 | $$\frac{TB+AT}{AT}=\frac{ }{ }$$ | Segment Addition Postulate |
| 6 | $$\frac{TB}{AT}=\frac{ }{ }$$ | Subtraction Property of Equality |

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| **Step** |  **Statement** | **Justification** |
| 1 | GK is parallel to HJ. | Given |
| 2 | ∠WSN ≅ ∠\_\_\_\_\_\_∠WNS ≅ ∠\_\_\_\_\_\_ |  |
| 3 | ΔWSN ~ Δ\_\_\_\_\_\_\_ |  |
| 4 | $$\frac{WA}{WS}=\frac{ }{ }$$ |  |
| 5 | $$\frac{SA+WS}{WS}=\frac{ }{ }$$ | Segment Addition Postulate |
| 6 | $$\frac{SA}{WS}=\frac{ }{ }$$ | Subtraction Property of Equality |

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| **2.** | **Use this triangle to complete the statements and justifications below.** |  | **2.** | **Use this triangle to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | PH ≅ SL | Given |
| 2 | ∠PHL ≅ ∠SLH | Given |
| 3 | HL ≅ LH | ? |
| 4 | ΔPHL ≅ ΔSLH | ? |

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| **Step** |  **Statement** | **Justification** |
| 1 | ∠N ≅ ∠T | Given |
| 2 | ∠NMY ≅ ∠TYM | Given |
| 3 | MY ≅ YM | ? |
| 4 | ΔNYM ≅ ΔTMY | ? |

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| **3.** | **Use these lines to complete the statements and justifications below.** |  | **3.** | **Use these lines to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | Line p intersects line q. | Given |
| 2 | ∠1 and ∠3 are a linear pair.∠2 and ∠3 are a linear pair. | Definition of Linear Pair |
| 3 |  |  |
| 4 |  |  |
| 5 |  | Subtraction Property  |
| 6 |  | Definition of Congruent Angles |

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| **Step** |  **Statement** | **Justification** |
| 1 | Line j intersects line k. | Given |
| 2 | ∠5 and ∠6 are a linear pair.∠6 and ∠7 are a linear pair. | Definition of Linear Pair |
| 3 |  |  |
| 4 |  |  |
| 5 |  | Subtraction Property  |
| 6 |  | Definition of Congruent Angles |

 |
| **OUR TURN** | **YOUR TURN** |
| **4.** | **Use this line and triangle to complete the statements and justifications below.** |  | **4.** | **Use this line and triangle to complete the statements and justifications below.** |  |
| LN and $\overleftrightarrow{AF}$ are parallel, so LT is a transversal. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ formed by the transversal are congruent. So, m∠L = m∠\_\_\_\_\_\_.Similarly, TN is a transversal, so m∠N = m∠\_\_\_\_\_\_.The sum of the angle measures that make a straight line is \_\_\_\_\_°. So, m∠\_\_\_\_\_ + m∠\_\_\_\_\_ + m∠\_\_\_\_\_ = 180°. Now, substitute m∠L for m∠\_\_\_\_\_\_ and m∠N for m∠\_\_\_\_\_\_ to get m∠\_\_\_ + m∠LTN + m∠\_\_\_ = 180°. | KG and $\overleftrightarrow{MV}$ are parallel, so KN is a transversal. The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ formed by the transversal are congruent. So, m∠K = m∠\_\_\_\_\_\_.Similarly, NG is a transversal, so m∠G = m∠\_\_\_\_\_\_.The sum of the angle measures that make a straight line is \_\_\_\_\_°. So, m∠\_\_\_\_\_ + m∠\_\_\_\_\_ + m∠\_\_\_\_\_ = 180°. Now, substitute m∠K for m∠\_\_\_\_\_\_ and m∠G for m∠\_\_\_\_\_\_ to get m∠\_\_\_ + m∠KNG + m∠\_\_\_ = 180°. |
| **5.** | **Use this parallelogram to complete the statements and justifications below.** |  | **5.** | **Use this parallelogram to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | QUDL is a parallelogram. | Given |
| 2 | UL is a diagonal. | Given |
| 3 | QU ǁ LD, QL ǁ UD |  |
| 4 | ∠QUL ≅ ∠\_\_\_\_\_\_∠QLU ≅ ∠\_\_\_\_\_\_ |  |
| 5 | UL ≅ \_\_\_\_\_\_ |  |
| 6 | ΔQUL ≅ Δ\_\_\_\_\_\_ |  |
| 7 | QU ≅ DL |  |

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| **Step** |  **Statement** | **Justification** |
| 1 | PRGM is a parallelogram. | Given |
| 2 | PG is a diagonal. | Given |
| 3 | PR ǁ MG, PM ǁ RG |  |
| 4 | ∠RPG ≅ ∠\_\_\_\_\_\_∠RGP ≅ ∠\_\_\_\_\_\_ |  |
| 5 | PG ≅ \_\_\_\_\_\_ |  |
| 6 | ΔPRG ≅ Δ\_\_\_\_\_\_ |  |
| 7 | PM ≅ GR |  |

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| **6.** | **Use this triangle and perpendicular bisector to complete the statements and justifications below.** |  | **6.** | **Use this triangle and perpendicular bisector to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | DL is the perpendicular bisector of AS. | Given |
| 2 | AL ≅ \_\_\_\_ |  |
| 3 | DL ≅ \_\_\_\_ |  |
| 4 | ∠ALD and ∠\_\_\_\_\_\_ are right angles. |  |
| 5 | ∠ALD ≅ ∠\_\_\_\_\_\_ |  |
| 6 | ΔALD ≅ Δ\_\_\_\_\_\_ |  |
| 7 | AD ≅ SD |  |

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| **Step** |  **Statement** | **Justification** |
| 1 | CB is the perpendicular bisector of WY. | Given |
| 2 | WB ≅ \_\_\_\_ |  |
| 3 | CB ≅ \_\_\_\_ |  |
| 4 | ∠WBC and ∠\_\_\_\_\_\_ are right angles. |  |
| 5 | ∠WBC ≅ ∠\_\_\_\_\_\_ |  |
| 6 | ΔWBC ≅ Δ\_\_\_\_\_\_ |  |
| 7 | WC ≅ YC |  |

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| **OUR TURN** | **YOUR TURN** |
| **7.** | **Use this triangle to complete the statements and justifications below. You will need to construct an auxiliary line for Step 2.** |  | **7.** | **Use this triangle to complete the statements and justifications below.****You will need to construct an auxiliary line for Step 2.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | YN ≅ \_\_\_ | Given |
| 2 | Construct NW, the angle bisector for ∠\_\_\_, where W is on \_\_\_\_. | Every angle has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| 3 | ∠YNW ≅ ∠\_\_\_\_\_\_ |  |
| 4 | NW ≅ \_\_\_\_\_ |  |
| 5 | ΔYNW ≅ Δ\_\_\_\_\_\_ |  |
| 6 | ∠Y ≅ ∠\_\_\_ |  |

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| **Step** |  **Statement** | **Justification** |
| 1 | NG ≅ \_\_\_ | Given |
| 2 | Construct GS, the angle bisector for ∠\_\_\_, where S is on \_\_\_\_. | Every angle has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |
| 3 | ∠NGS ≅ ∠\_\_\_\_\_\_ |  |
| 4 | GS ≅ \_\_\_\_\_ |  |
| 5 | ΔNGS ≅ Δ\_\_\_\_\_\_ |  |
| 6 | ∠N ≅ ∠\_\_\_ |  |

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| **8.** | **Use this parallelogram to complete the statements and justifications below.** |  | **8.** | **Use this parallelogram to complete the statements and justifications below.** |  |
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| **Step** |  **Statement** | **Justification** |
| 1 | PARL is a parallelogram. | Given |
| 2 | PR is a diagonal. | Given |
| 3 | PA ǁ LR, PL ǁ AR |  |
| 4 | ∠LRP ≅ ∠\_\_\_\_\_\_∠LPR ≅ ∠\_\_\_\_\_\_ |  |
| 5 | PR ≅ \_\_\_\_\_\_ |  |
| 6 | ΔLRP ≅ Δ\_\_\_\_\_\_ |  |
| 7 | PL ≅ AR |  |

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| **Step** |  **Statement** | **Justification** |
| 1 | QUAD is a parallelogram. | Given |
| 2 | DU is a diagonal. | Given |
| 3 | QU ǁ DA, QD ǁ UA |  |
| 4 | ∠QUD ≅ ∠\_\_\_\_\_\_∠QDU ≅ ∠\_\_\_\_\_\_ |  |
| 5 | DU ≅ \_\_\_\_\_\_ |  |
| 6 | ΔQUD ≅ Δ\_\_\_\_\_\_ |  |
| 7 | QU ≅ DA |  |

 |
| **9.** | **In the diagram, line *t* is the transversal of parallel lines *p* and *q*. How can the relationship between ∠2 and ∠3 be written in three different ways?** |  | **9.** | **In the diagram, line *t* is the transversal of parallel lines *p* and *q*. How can the relationship between ∠6 and ∠7 be written in three different ways?** |  |
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| **OUR TURN** | **YOUR TURN** |
| **10.** | **Given two sets of parallel lines in the diagram, describe the relationships between ∠4 and ∠10 using ∠14.**  | **10.** | **Given two sets of parallel lines in the diagram, describe the relationships between ∠6 and ∠16 using ∠11.**  |

**Response Problems**

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| **OUR TURN** | **YOUR TURN** |
| **11.** | **In ΔABC, segments LM, MN and NL are midsegments. If AM = 33, ML = 64 and CB = 108, then explain how to find the perimeter of ΔLMN.** |  | **11.** | **In ΔABC, segments LM, MN and NL are midsegments. If NM = 37, NB = 36 and CA = 80, then explain how to find the perimeter of ΔLMN.** |  |
| **12.** | **Compare and contrast how to find the measure of ∠A in each triangle.**  | **12.** | **Compare and contrast how to find the measure of ∠A in each triangle.** |
| **13.** | **Explain how to find the measure of ∠KRN in parallelogram NYRK.** | **13.** | **Explain how to find the measure of ∠NMQ in parallelogram LMNQ.** |