**4.1 Extra Problems ANSWERS**

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| --- |
| 1) 127o |
| 2) D |
| 3) B |

**4.2 Extra Problems ANSWERS**

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| 1) 118o |
| 2) Scalene |
| 3) A |
| 4) Given:  Prove: X is the midpoint of |
| |  |  | | --- | --- | | 1. | 1. Given | | 2. | 2. CPCTC | | 3. X is the midpoint of | 3. If a point divides a segment into 2 |   5)  Given: ,  supp. , supp.  Prove:   |  |  | | --- | --- | | 1. ,  supp. , supp. | 1. Given | | 2. | 2. CPCTC | | 3. | 3. If 2 s are supp. to  then they are to eachother | |

**4.3 Extra Problems ANSWERS**

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| 1)  Given:  Prove: | | D  B  A  E  C | |
| 1) | |  | 1) Given |
| 2) | |  | 2) If a point is a bisector, then it creates 2 congruent segments. |
| 3) | |  | 3) SSS (1, 1, 2) |
|  | | | |
| 2) Given:  Prove: | Q  R  T  S | | |
| 1) | 1) Given | | |
| 2) | 2) Reflexive | | |
| 3) | 3) SSS (1, 1, 2) | | |
|  |  | | |
| 3)  Given: R is the midpoint of  Prove: | P  S  R  Q  T | | |
| 1) R is the midpt of | 1) Given | | |
| 2) | 2) If a segment is a midpoint, then it creates 2 congruent segments. | | |
| 3) PRQ and SRT are vertical | 3) Diagram (optional step) | | |
| 4) | 4) If two angles are vertical angles, then they are congruent. | | |
| 5) | 5) SAS (2, 4, 2) | | |
| 6) | 6) CPCTC | | |
| 4)  Given:  Prove: |  | | |
| 1) | 1) Given | | |
| 2) ADB and CDB are rt <’s | 2) If 2 seg are , then they create rt ’s. | | |
| 3) | 3) If 2 s are rt s, then they are congruent. | | |
| 4) | 4) If a segment bisects a segment, then it creates two congruent segments. | | |
| 5) | 5) Reflexive Property | | |
| 6) | 6) SAS (4, 3, 5) | | |
|  |  | | |
| 5)  Given:  Prove: | W  X  Y  Z | | |
| 1) | 1) Given | | |
| 2) | 2) Reflexive Property | | |
| 3) | 3) If parallel lines, then alt int s are congruent. | | |
| 4) | 4) SAS (1, 3, 2) | | |
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**4.6 Extra Problems ANSWERS**

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| 1) 84o | | | | | |
| 2) **Given:** ,  **Prove:**  W | | | | | V  Z  Y  X |
| 1) , | | | 1) Given | | |
| 2) | | | 2) If , then | | |
| 3) | | | 3) SAS (1, 1, 2) | | |
|  | | | | | |
| 3) 30o | | | |  | |
| 4) *x* = 25o, and *y* = 75o | | |  | | |
| 5) **Given:**  **Prove:**  G | | | J  K  F  H | | |
| 1) | | | 1) Given | | |
| 2) | | | 2) If , then | | |
| 3) | | | 3) If 2 s are vertical, then they are congruent. | | |
| 4) | | | 4) Transitive | | |
|  | | |  | | |
| 6) 57 | | | | | |
| 7) | | | | | |
| 8) **Given:** ,  **Prove:**  W | | | V  Z  Y  X | | |
| 1) , | | | 1) Given | | |
| 2) | | | 2) If , then | | |
| 3) <XVW is supp to XVZ  <XZY is supp to XZV | | | 3) If 2 s form a linear pair, then they are supp. | | |
| 4) | | | 4) If two angles are supplements of congruent angles, then they are congruent. | | |
| 5) | | | 5) SAS (1, 4, 2) | | |
| 6) | | | 6) | | |
|  | | | | | |
| 9) **Given:** ,  **Prove:** | | | | | |  |
| 1) ∠1≅∠3,∠2≅∠4 |  | 1. Given | | | |
| 2) HG ≅ GI |  | 1. If , then | | | |
| 3) EGH ≅ FGI |  | 1. If two angles are vertical, then they are congruent. | | | |
|  |  | 1. ASA(1, 2, 3) | | | |
|  |  | 1. CPCTC | | | |