You know how to solve these kinds of problems. Now, I expect you to explain how you solve them. Your work is to fill in the blanks explaining **how I got to each step (never explain ahead of the step you’re on).**

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| **Problem #1**  Given:    Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are vertical angles, & | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | | 9. | 9. | | **Problem #2:**  Given:    Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are vertical angles, & | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | | 9. | 9. | | 10. | 10. | |

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| **Problem #3:**  Given:    Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are a linear pair, & | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | | **Problem #4:**  Given:    Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are a linear pair, & | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | |

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| **Problem #5:**  Given:  &  Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are alternate exterior angles & | 1. | | 2. | 2. | | 3. | 3. | | 4. & | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | | 9. | 9. | | 10. | 10. | | **Problem #6:**  Given:  &  Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. ,  & | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | | 7. | 7. | | 8. | 8. | | 9. are corresponding angles | 9. | | 10. | 10. | |

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| **Problem #7:**  Given:  Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1. are same side interior angles | 1. | | 2. | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | **Problem #8:**  Given:  &  Prove:   |  |  | | --- | --- | | **Statements** | **Reasons** | | 1.  & | 1. | | 2. are alternate interior angles | 2. | | 3. | 3. | | 4. | 4. | | 5. | 5. | | 6. | 6. | |