Section\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_

Prove Theorems about Perpendicular Lines

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| Vocabulary | Definition | Example |
| DISTANCE FROM a POINT to a LINE | The distance from a point to a line is the length of the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ segment from the point to the line.  This perpendicular segment is the shortest distance from the point to the line. |  |
| THEOREM 3.8 | If two lines intersect to form a linear pair of congruent angles, then the lines are  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |  |
| THEOREM 3.9 | If two lines are perpendicular, then they intersect to form four \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |  |
| THEOREM 3.10 | If two sides of two adjacent acute angles are perpendicular, then the angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. |  |
| THEOREM 3.11  PERPENDICUALR TRANSVERSAL THEOREM | If a transversal is perpendicular to one of two parallel lines, then it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the other. |  |
| THEOREM 3.12  LINES PERPENDICUALR TRANSVERSAL THEOREM | In a plane, of two lines are perpendicular to the same line, then they are \_\_\_\_\_\_\_\_\_\_\_\_\_ to each other. |  |