Answer Key

1. $m\angle 1 = m\angle 2$ — **GIVEN**

$\angle 1 \cong \angle 2$	Definition of Congruent Angles *(**Congruent angles** - Angles that have the same measure.)*

2. $m\angle 1 + m\angle 5 = 90$ degrees — **GIVEN**

$\angle 1$ and $\angle 5$ are complementary angles	Definition of Complementary Angles *(**Complementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

3. $\angle 1$ and $\angle 7$ form a linear pair — **GIVEN**

$\angle 1$ and $\angle 7$ are supplementary angles	Linear Pair Theorem *(**LPT**-If two angles form a linear pair then they are supplementary.)*
$m\angle 1 + m\angle 7 = 180$ degrees	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

4. $\angle 8$ is a rt angle and $\angle 9$ is a rt angle — **GIVEN**

$\angle 8 \cong \angle 9$	Right Angle Congruence Theorem *(**RACT**-All right angles are congruent.)*
$m\angle 8 = m\angle 9$	Definition of Congruent Angles *(**Congruent angles** - Angles that have the same measure.)*

5. $\angle 4$ and $\angle 7$ are complementary — **GIVEN**

$m\angle 4 + m\angle 7 = 90$ degrees	Definition of Complementary Angles *(**Complementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

6. $\angle 1 \cong \angle 7$ — **GIVEN**

$m\angle 1 = m\angle 7$	Definition of Congruent Angles *(**Congruent angles** - Angles that have the same measure.)*

7. $m\angle 1 + m\angle 4 = 180$ degrees — **GIVEN**

$\angle 1$ and $\angle 4$ are supplementary angles	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

8. $\angle 8$ and $\angle 9$ are vertical angles — **GIVEN**

$\angle 8 \cong \angle 9$	Vertical Angles Theorem *(**VAT**-Vertical Angles are Congruent.)*

$m\angle 8 = m\angle 9$	Definition of Congruent Angles *(**Congruent angles** - Angles that have the same measure.)*

9. $\angle 3$ and $\angle 8$ are supp. angles **GIVEN**

$m\angle 3 + m\angle 8 = 180$ degrees	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

10. $\angle 8$ and $\angle 10$ are both supplementary to $\angle 7$ **GIVEN**

$\angle 8 \cong \angle 10$	Congruent Supplements Theorem *(**CST**-If two angles are supplementary to the same angle then the two angles are congruent.)*

11. $\angle 1$ and $\angle 2$ are supplementary **GIVEN**

$m\angle 1 + m\angle 2 = 180$ degrees	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

12. $\angle 1$ and $\angle 5$ are supplementary **GIVEN**

$m\angle 1 + m\angle 5 = 180$ degrees	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*

13. $\angle ABC$ is a right angle **GIVEN**

$m\angle ABC = 90$ degrees	Definition of a right angle *(**Right Angle**- An angle that measures 90 degrees)*

14. DB = SG **GIVEN**

$\overline{DB} \cong \overline{SG}$	Definition of congruent segments *(**Congruent Segments-** Segments that have the same length.)*

15. $\angle H$ and $\angle P$ form a linear pair **GIVEN**

$\angle H$ and $\angle P$ are supplementary	Linear Pair Theorem *(**LPT**-If two angles form a linear pair then they are supplementary.)*
$m\angle H + m\angle P = 180$ degrees	Definition of Supplementary Angles *(**Supplementary Angles**-Two angles whose measures have a sum of 90 degrees.)*