1. In the accompanying diagram of rhombus QRST, diagonals $QS$ and $RT$ intersect at $M$. Which statement *must* be true?

   (a) $\triangle QRM$ is an isosceles right triangle  
   (b) $\triangle QRM \cong \triangle SRM$  
   (c) $QS \cong RT$  
   (d) $\triangle QRM$ is an obtuse triangle

2. Which statement describes the properties of the diagonals of a rectangle?
   I. The diagonals are congruent
   II. The diagonals are perpendicular
   III. The diagonals bisect each other

   (a) II and III only  
   (b) I and II only  
   (c) I and III only  
   (d) I, II and III

3. The diagonals of a rhombus do not always
   (a) bisect each other  
   (b) intersect at right angles  
   (c) have the same length  
   (d) bisect the angles to which they are drawn

4. Which statement is *not* true?
   (a) All rectangles are parallelograms  
   (b) All rhombuses are rectangles  
   (c) All rhombuses are parallelograms  
   (d) All rectangles are quadrilaterals

5. Write the equation of the perpendicular bisector of $\overline{GK}$ if the endpoints are $G(5, -6)$ and $K(-7, -4)$.

6. Given the coordinates of quadrilateral MATH, $M(-2, 3), A(-5, -4), T(2, -1)$ and $H(5, 6)$.
   Prove that MATH is a rhombus
7. Given: A(-2, 2), B(6, 5), C(4, 0) and D(-4, -3)
   Prove: ABCD is a parallelogram but not a rectangle

8. Given: ABCD is a rhombus
   \( \overline{AE} \equiv \overline{CE} \)
   Prove: \( \angle ADE \equiv \angle CDE \)

9. Given: AECB is a rhombus, \( \overline{AED}, \overline{FEC} \)
   \( \angle FAB \equiv \angle DCB \)
   Prove: \( \overline{FE} \equiv \overline{DE} \)

10. (H) Given: Parallelogram ABCD
    \( \overline{DFEB}, \overline{DF} \equiv \overline{BE} \)
    Prove: AECF is a parallelogram