Geometry R – Mr. Bo
Unit 7 – Day 3 HW

Name_____
Date_____

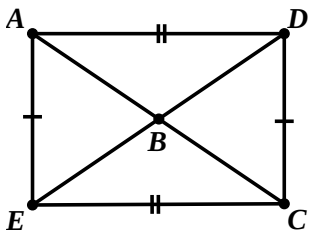
1. Which is always true of consecutive sides of a Rectangle?
   a. are perpendicular b. are parallel
   c. are congruent d. none of these

2. Quadrilateral ABCD must be a Rectangle if:
   a. $m\angle A = 90^0$ c. $\overline{AB} // \overline{CD}$
   b. $\overline{AC} \cong \overline{BD}$ d. $\angle A \cong \angle B \cong \angle C \cong \angle D$

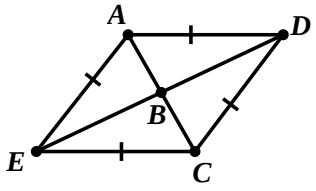
3. Quadrilateral ABCD has perpendicular diagonals. Which statement must be true?
   a. ABCD is a Parallelogram c. ABCD is a Rectangle
   b. ABCD is a Rhombus d. None of these

4. Which method will prove that Quadrilateral ABCD is a Rhombus?
   a. Proving $\overline{AB} \cong \overline{CD}$ c. Proving $\overline{AC} \perp \overline{BD}$
   b. Proving $\overline{AC}$ bisects $\angle BAD$ d. Proving $\overline{AB} \cong \overline{BC} \cong \overline{CD} \cong \overline{DA}$

5. Rectangle ADCE, $m\angle BEC = 25$.
   Find $m\angle AEB \& m\angle EBC$.

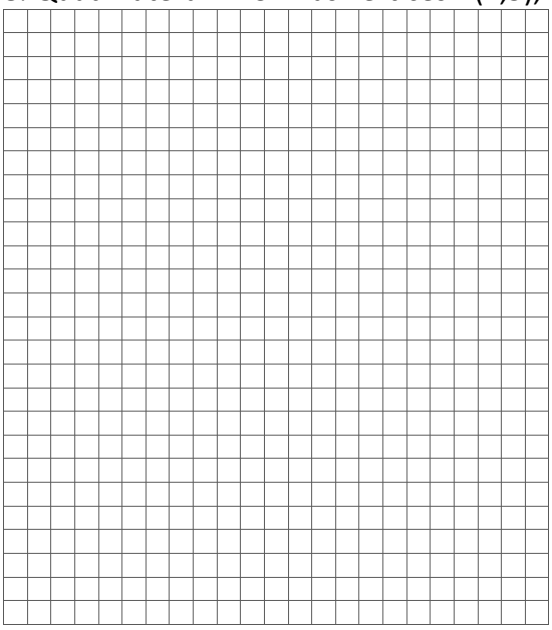


6. Rhombus ADCE. $m\angle AEC = 56$.
   Find $m\angle BEC \& m\angle DCE$.



7. Quadrilateral ABCD has vertices A(-1,3), B(-2,6), C(2,11) and D(3,8). Prove ABCD is a Parallelogram.

8. Quadrilateral ABCD has vertices A(2,5), B(7,1), C(2,-3) and D(-3,1). Prove that ABCD is a Rhombus.



9. Given: $\overline{AEFC}$
$\overline{AF} \cong \overline{CE}$
$\overline{BE} \cong \overline{DF}$
$\angle BEF$ & $\angle DFE$ are right angles

Prove: ABCD is a parallelogram

Hint: Show that ABCD is a quad with 1 pair of sides both $\cong$ and //.