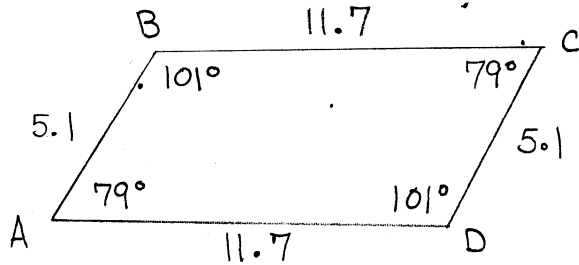# Math 096 - Quiz 9

April 19, 2017

Name ___key___

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (3 points) In parallelogram $ABCD$, $m(\overline{AB}) = 5.1$, $m(\angle B) = 101°$, and $m(\overline{BC}) = 11.7$. Roughly sketch the parallelogram and determine the measures of all angles and sides.

2. (2 points) Refer to the parallelogram above. Which one of the two diagonals is the longest? How do you know?

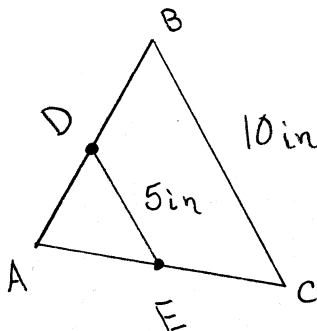DIAGONAL $\overline{AC}$ IS LONGEST BECAUSE IT IS OPPOSITE THE BIGGER ANGLE.

3. (1 point) What type of quadrilateral has two pairs of congruent adjacent sides?

KITE

4. (1 point) What type of quadrilateral is a parallelogram with a right angle?

RECTANGLE

5. (3 points) In $\triangle ABC$, the side $\overline{BC}$ has length 10 in. Suppose point D is the midpoint of $\overline{AB}$ and point E is the midpoint of $\overline{AC}$. Find x if $m(\overline{DE}) = 3x - 2$.

$3x - 2 = 5$

$3x = 7$

$x = \dfrac{7}{3}$ in