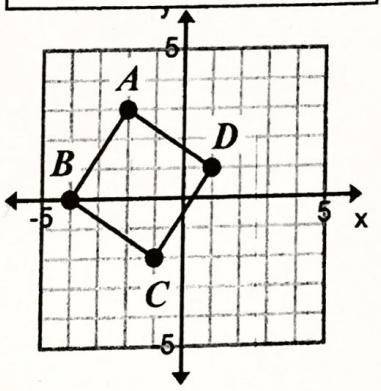
Name: _____ Period: _____

Score: _____ / _____ _____ %

HW 5-5 HONORS: Properties of Quadrilaterals

1. Determine whether the quadrilateral is a square based on the properties of sides, angles, and diagonals in squares. (Make sure you use correct notation in the table.)



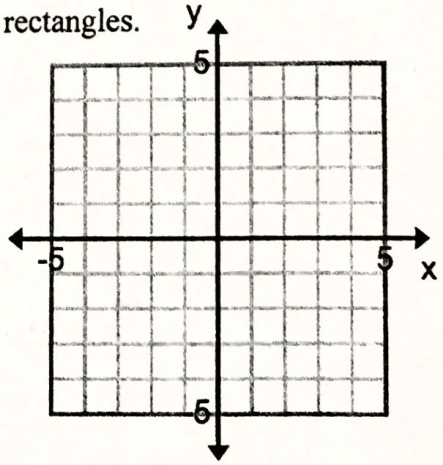
Slope of the Sides:			
$m_{AB} = \frac{3}{2}$	$m_{BC} = \frac{-2}{3}$	$m_{CD} = \frac{3}{2}$	$m_{AD} = \frac{-2}{3}$
Length of the Sides:			
$AB = 3.61$	$BC = 3.61$	$CD = 3.61$	$DA = 3.61$
Angle Measures:			
$\angle A = 90°$ because $\overline{AB} \perp \overline{AD}$	$\angle B = 90°$ $\overline{BA} \perp \overline{BC}$	$\angle C = 90°$ $\overline{BC} \perp \overline{CD}$	$\angle D = 90°$ $\overline{AD} \perp \overline{DC}$

Diagonals:		
Length:	Slope:	Relationship:
$AC = 5.1$ units	$m_{AC} = -5/1$	$\cong \neq \perp$
$BD = 5.1$ units	$m_{BD} = 1/5$	

Is it a square? Yes! Explain using a sentence and mathematical reasoning from the box above.

All sides were the same length & there are 4 right angles. The rest of the information supports the fact that it is a square.

2. Determine whether the quadrilateral $A(-4,1)$, $B(3,3)$, $C(4,-2)$, $D(-3,-3)$ is a rectangle based on the properties of sides, angles and in rectangles. Justify your reasoning.



Slope of the Sides:			
Length of the Sides:			
Angle Measures:			

Diagonals:		
Length:	Slope:	Relationship:

Is it a rectangle? _____ Explain using a sentence and mathematical reasoning from the box above.