

Distance $\sqrt{(x_2-x_1)^2 + (y_2-y_1)^2}$

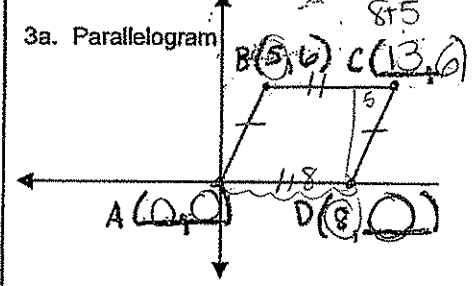
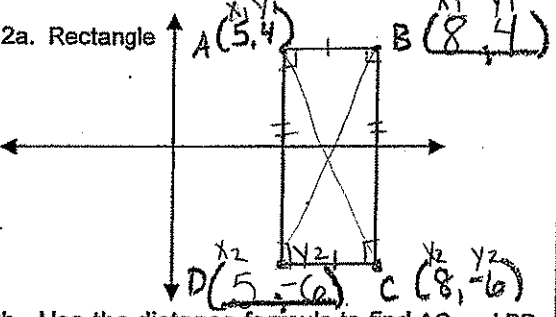
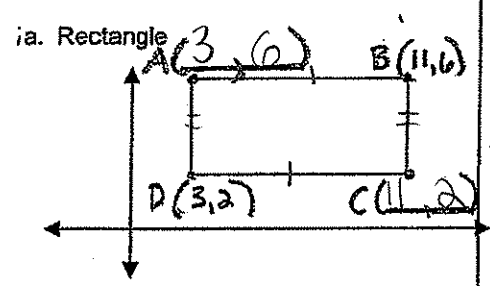
Slope $\frac{y_2-y_1}{x_2-x_1}$ rise / run

Mid Point $(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2})$

Coordinate Geometry Practice

Name KEY

Fill in the missing ordered pairs. Use the calculations to fill in the blanks correctly.



1b. Determine the following lengths:

$\overline{AB} = 8$ $\overline{CD} = 8$

$\overline{CB} = 4$ $\overline{AD} = 4$

1c. The opposite sides of a rectangle are parallel since their lengths are equal.

2b. Use the distance formula to find AC and BD

$AC = \sqrt{(8-5)^2 + (-6-4)^2}$
 $3^2 + -10^2$
 $9 + 100 = 109$
 $AC = 10.44$ $BD = 10.44$

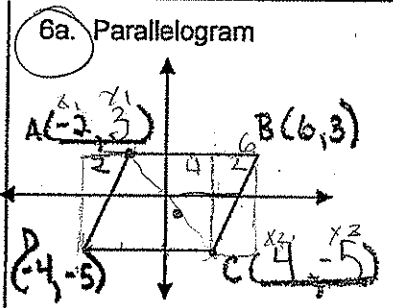
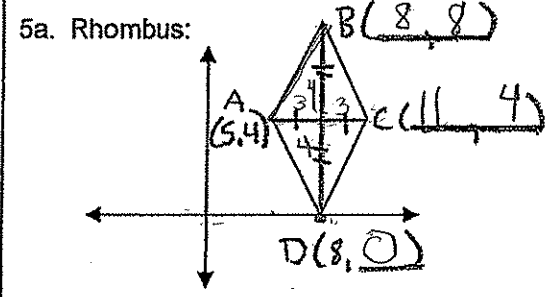
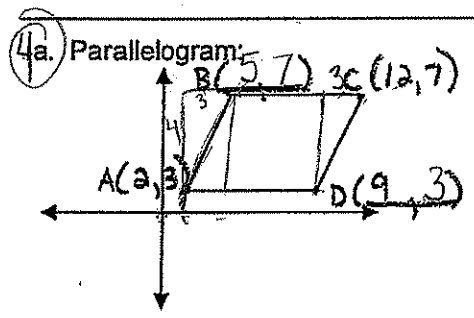
2c. The diagonals of a rectangle are \cong since their lengths are equal.

$BD = \sqrt{(5-8)^2 + (-6-4)^2}$
 $-3^2 + -10^2$ $9+100 = 109$

3b. Find the slope of each side:
work:

m of $\overline{AB} = \frac{6}{5}$
 m of $\overline{CD} = \frac{6}{5}$
 m of $\overline{CB} = 0$
 m of $\overline{AD} = 0$

3c. The opposite sides of a parallelogram are \cong since they have the same slope.



4b. Determine the following lengths:

$\overline{AB} = 5$ $\overline{CD} = 5$
 $16+9 = 25$

$\overline{CB} = 7$ $\overline{AD} = 7$

4c. The opposite sides of a parallelogram are \cong since their lengths are equal.

5b. Find the slope of AC and BD

m of $\overline{AC} = 0$ m of $\overline{BD} = \text{und.}$

5c. Based on these slopes, the diagonals of a rhombus are perpendicular

5d. Find the lengths of AC and BD:

$AC = 6$ $BD = 8$

5e. The diagonal of a rhombus are NOT

\cong since their lengths are not equal.

6b. Find the midpoint of \overline{AC} & \overline{BD}

$(\frac{-2+4}{2}, \frac{3-5}{2}) = (\frac{2}{2}, \frac{-2}{2})$
 midpoint of $\overline{AC} = (1, -1)$

midpoint of $\overline{BD} = (1, -1)$

6c. The diagonals of a parallelogram \cong each

other since they share the same M.P.