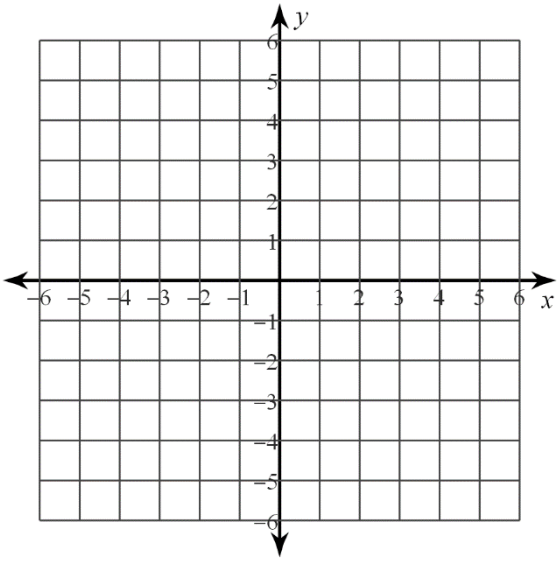
Name: _____

10.7.D1 • Quadrilaterals on the Coordinate Plane

Past due on: _____ Period: _____

Graph the quadrilateral described. Use the distance and slope formulas to prove that the figure is a special quadrilateral. <u>Show all work on a separate sheet of paper</u>. Explain why the special quadrilateral is the indicated quadrilateral.

1. $M(2,-6), N(6,0), P(4,5), Q(0,-1)$



Show that $MNPQ$ is a parallelogram.

Find the slopes of:

$m_{QP} =$

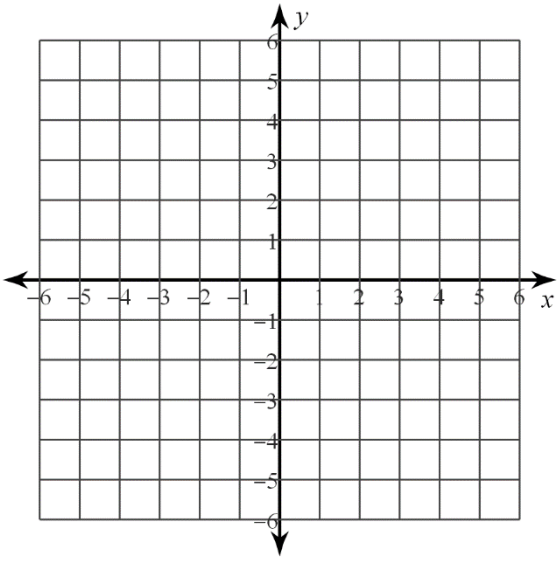
$m_{MN} =$

$m_{QM} =$

$m_{PN} =$

Explain why $MNPQ$ is a parallelogram:

2. $A(-3,-1), B(6,2), C(5,5), D(-4,2)$



Show that $ABCD$ is a rectangle.

Find the slopes of:

$m_{AB} =$

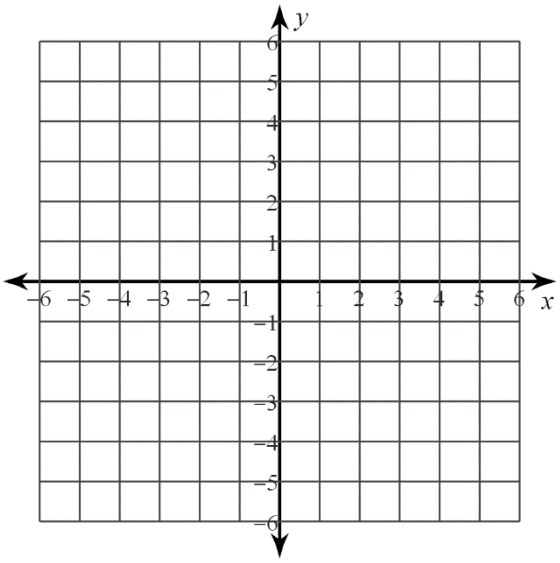
$m_{BC} =$

$m_{CD} =$

$m_{DA} =$

Explain why $ABCD$ is a rectangle:

3. $W, (4,1), X(1,5), Y(-3,2), Z(0,-2)$



Show that $WXYZ$ is a square.

Find the slopes of:

$m_{WX} =$

$m_{XY} =$

$m_{YZ} =$

$m_{ZW} =$

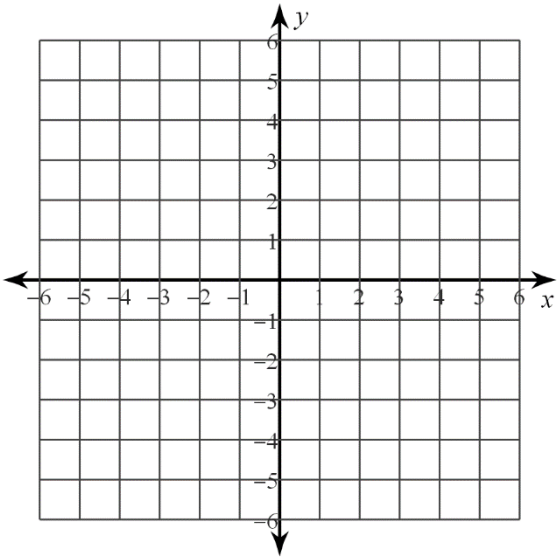
Find the length of:

$XY =$

$XW =$

Explain why $WXYZ$ is a square:

4. $K(-6,-6), L(6,2), M(-2,6), N(-5,4)$



Show that $KLMN$ is a trapezoid:

Find the slopes of:

$m_{KN} =$

$m_{ML} =$

$m_{NM} =$

$m_{KL} =$

Explain why $KLMN$ is a trapezoid:

5. Is $KLMN$ an isosceles trapezoid? Explain your reasoning.