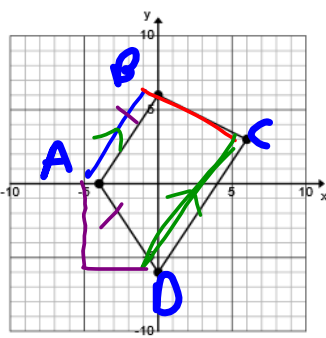


Geometry (E)

Name: _____

Chapter 7 Coordinate Geometry Review

Period: _____



Give the best classification for this quadrilateral
Justify your selection with numerical support.

$$m_{AB} = \frac{6}{4} = \frac{3}{2}$$

$$AB = \sqrt{6^2 + 4^2} = \sqrt{52}$$

$$m_{DC} = \frac{9}{6} = \frac{3}{2}$$

$$DC = \sqrt{9^2 + 6^2} = \sqrt{117}$$

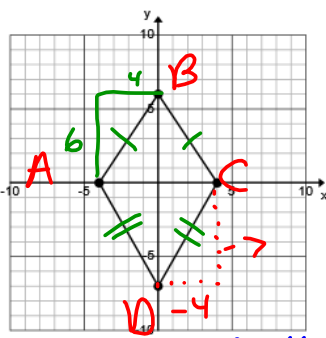
$$m_{BC} = \frac{3}{-6} = -\frac{1}{2}$$

$$BC = \sqrt{3^2 + (-6)^2} = \sqrt{45}$$

$$m_{AD} = \frac{-6}{4} = -\frac{3}{2}$$

$$AD = \sqrt{(-6)^2 + 4^2} = \sqrt{52}$$

Trapezoid
not isosceles, legs not \cong



Give the best classification for this quadrilateral
Justify your selection with numerical support.

$$m_{AB} = \frac{4}{5} = \frac{4}{5}$$

$$AB = \sqrt{5^2 + 4^2} = \sqrt{41}$$

$$m_{CD} = \frac{-4}{5} = -\frac{4}{5}$$

$$CD = \sqrt{5^2 + 4^2} = \sqrt{41}$$

$$m_{BC} = \frac{-4}{5} = -\frac{4}{5}$$

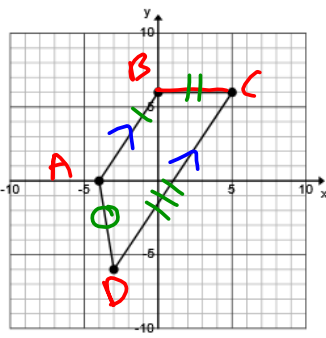
$$BC = \sqrt{5^2 + 4^2} = \sqrt{41}$$

$$m_{AD} = \frac{4}{5} = \frac{4}{5}$$

$$AD = \sqrt{5^2 + 4^2} = \sqrt{41}$$

Slope shows \parallel or \perp
Side lengths congruent or not

Since No pairs of \parallel sides
Not a trapezoid or Parallelogram
Since there are 2 pairs of consecutive sides \cong it's a Kite.



Give the best classification for this quadrilateral
Justify your selection with numerical support.

$$m_{AB} = \frac{6}{4} = \frac{3}{2}$$

$$AB = \sqrt{6^2 + 4^2} = \sqrt{52}$$

$$m_{DC} = \frac{9}{6} = \frac{3}{2}$$

$$DC = \sqrt{9^2 + 6^2} = \sqrt{117}$$

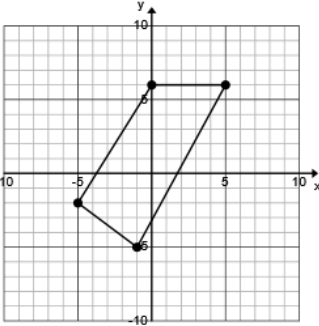
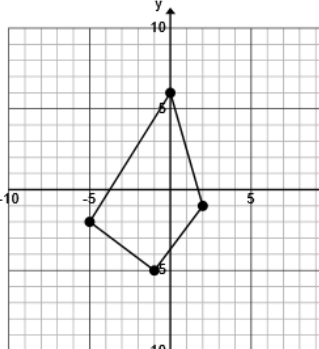
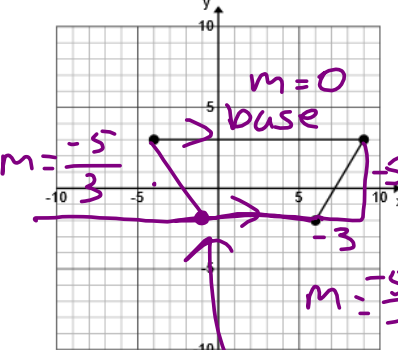
$$m_{BC} = \frac{0}{5} = 0$$

$$BC = 5$$

$$m_{AD} = \frac{6}{-1} = -6$$

$$AD = \sqrt{37}$$

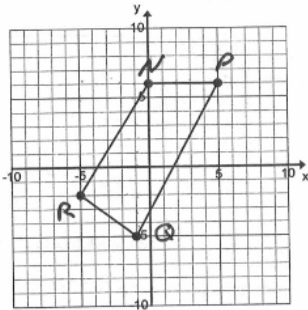
Since only one pair of \parallel sides Not a Kite or Parallelogram
Since legs not congruent it's a trapezoid

	<p>Give the best classification for this quadrilateral Justify your selection with numerical support.</p>
	<p>Give the best classification for this quadrilateral Justify your selection with numerical support.</p>
	<p>Determine the location of a fourth point that will create an isosceles trapezoid. Prove the diagonals of your isosceles trapezoid are congruent.</p> <p>bases have slope of 0</p> <p>$(-1, -2)$</p> <p>leg = $\sqrt{(-5)^2 + (-2)^2} = \sqrt{34}$</p> <p>so using slope $\frac{-5}{3}$</p> <p>$\sqrt{(-5)^2 + 3^2} = \sqrt{34}$</p>

Name KEY

Classifications of Quadrilateral Hour 1 2 3 4 5 6 7

	<p>Give the best classification for this quadrilateral Justify your selection with numerical support</p> <p><u>SLOPES</u> $\overline{AB} = -\frac{1}{3} = -\frac{1}{3}$ $\overline{BC} = \frac{3}{2} = \frac{3}{2}$ $\overline{CD} = -\frac{3}{2} = -\frac{3}{2}$ $\overline{AD} = \frac{3}{2} = \frac{3}{2}$</p> <p><u>DISTANCES / LENGTHS</u> $\overline{AB} = \sqrt{3^2+6^2} = \sqrt{45}$ $\overline{BC} = \sqrt{4^2+6^2} = \sqrt{52}$ $\overline{CD} = \sqrt{4^2+6^2} = \sqrt{52}$ $\overline{AD} = \sqrt{2^2+8^2} = \sqrt{68}$</p> <p>$\overline{AD} \parallel \overline{BC}$ • BOTH PAIRS OPP SIDES \nparallel → NOT PARALLELOGRAM • 1 PAIR OPP SIDES \parallel → TRAPEZOID • LEGS \neq → NOT ISO. TRAPEZOID</p> <p style="text-align: center;">TRAPEZOID</p>
	<p>Give the best classification for this quadrilateral Justify your selection with numerical support</p> <p><u>SLOPES</u> $\overline{EH} = \frac{6}{4} = \frac{3}{2}$ $\overline{FG} = \frac{2}{4} = \frac{1}{2}$ $\overline{HG} = -\frac{2}{4} = -\frac{1}{2}$ $\overline{EF} = -\frac{6}{4} = -\frac{3}{2}$</p> <p><u>DISTANCES</u> $\overline{EH} = \sqrt{6^2+4^2} = \sqrt{52}$ $\overline{FG} = \sqrt{6^2+4^2} = \sqrt{52}$ $\overline{HG} = \sqrt{7^2+4^2} = \sqrt{65}$ $\overline{EF} = \sqrt{7^2+4^2} = \sqrt{65}$</p> <p>• OPP SIDES \nparallel → NOT PARAL. • NO SIDES \parallel → NOT TRAP. • CONSEC. SIDES \cong → KITE</p> <p style="text-align: center;">(DITE) KITE</p>
	<p>Give the best classification for this quadrilateral Justify your selection with numerical support</p> <p><u>SLOPES</u> $\overline{MJ} = \frac{6}{4} = \frac{3}{2}$ $\overline{LK} = \frac{12}{8} = \frac{3}{2}$ $\overline{JK} = 0$ (HORIZ) $\overline{ML} = -\frac{1}{4}$</p> <p><u>DISTANCES</u> $\overline{MJ} = \sqrt{6^2+4^2} = \sqrt{52}$ $\overline{LK} = \sqrt{12^2+8^2} = \sqrt{208}$ $\overline{JK} = 4$ $\overline{ML} = \sqrt{6^2+1^2} = \sqrt{37}$</p> <p>• 1 PAIR OPP SIDES \parallel → TRAP. • LEGS NOT \cong → NOT ISO. TRAP.</p> <p style="text-align: center;">TRAPEZOID</p>

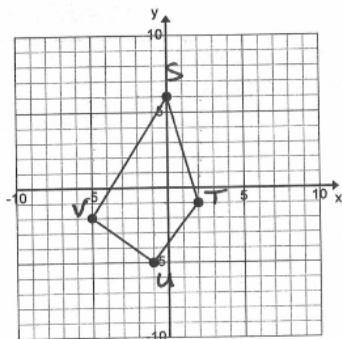


Give the best classification for this quadrilateral
Justify your selection with numerical support

SLOPES	DISTANCES
$\overline{NP} = 0$ (Horizontal)	$\sqrt{1^2 + 6^2} = \sqrt{37}$
$\overline{PQ} = \frac{11}{6}$	$\sqrt{3^2 + 4^2} = 5$
$\overline{QR} = -\frac{3}{4}$	$\sqrt{8^2 + 5^2} = \sqrt{89}$
$\overline{NR} = \frac{11}{5}$	

- NO OPP SIDES \parallel (NOT \square OR TRAP.)
- NO SIDES \cong (NOT KITE)

QUADRILATERAL

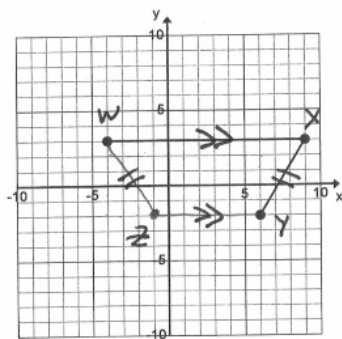


Give the best classification for this quadrilateral
Justify your selection with numerical support

SLOPES	DISTANCES
$\overline{ST} = -\frac{3}{4}$	$\sqrt{7^2 + 2^2} = \sqrt{53}$
$\overline{TV} = \frac{1}{2}$	$\sqrt{4^2 + 3^2} = 5$
$\overline{UV} = -\frac{3}{4}$	$\sqrt{3^2 + 4^2} = 5$
$\overline{VS} = \frac{11}{8}$	$\sqrt{8^2 + 5^2} = \sqrt{89}$

- NO OPP SIDES \parallel (NOT \square OR TRAP.)
- NO SIDES \cong (NOT KITE)

QUADRILATERAL



Determine the location of a fourth point that will create an isosceles trapezoid.

Prove the diagonals of your isosceles trapezoid are congruent

$\overline{WX} \parallel \overline{YZ} \rightarrow$ PARALLEL SIDES = TRAP

SCOPE $\overline{XY} = \frac{5}{3}$

SCOPE $\overline{WZ} = -\frac{5}{3}$

) OPP SIDES (LEGS)