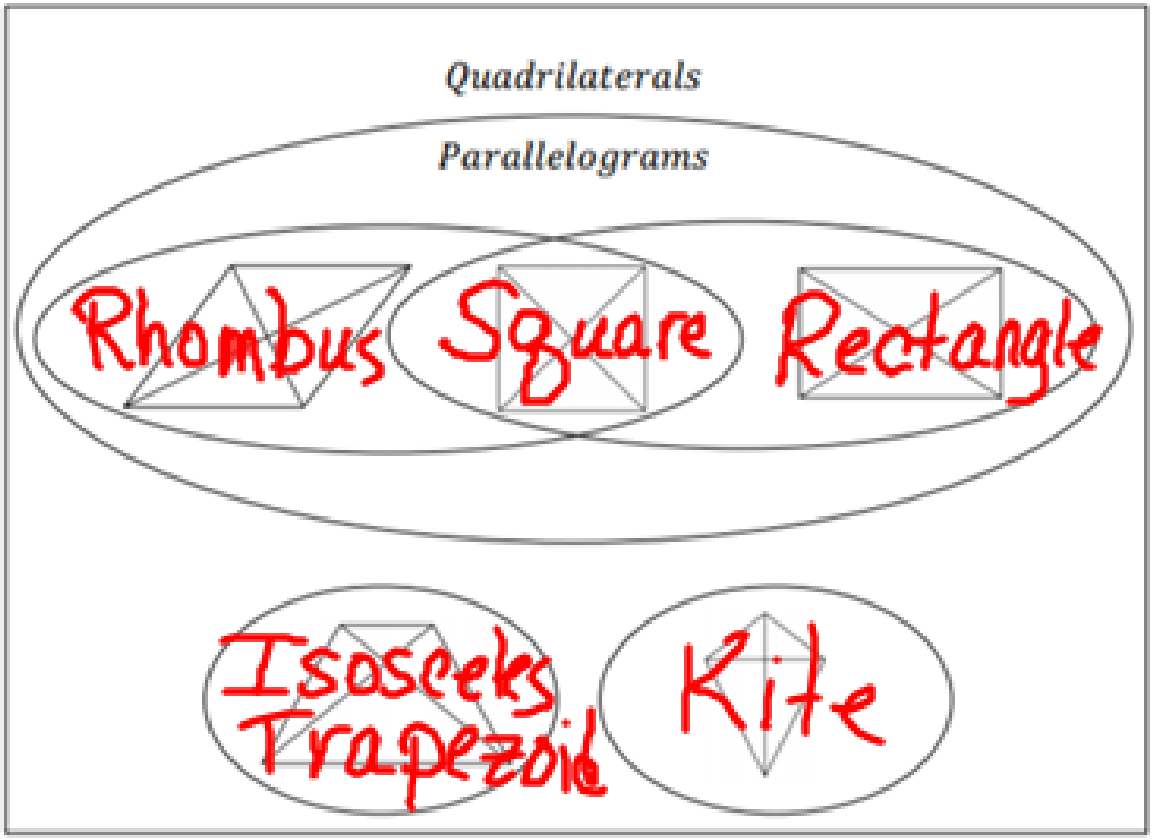
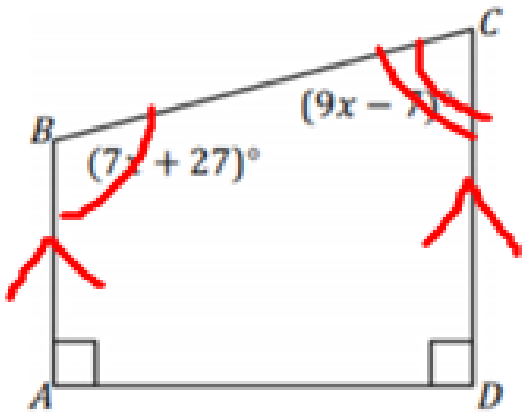
Name the specific quadrilaterals in the Venn Diagram below.



Characteristics of Quadrilaterals				
Polygon	**Opposite Sides**	**Adjacent Sides**	**Angles**	**Diagonals**
Parallelogram	// & ≅		opp ≅ Adj supp	bisect ea. other
Rhombus	// & ≅	≅	opp ≅ Adj supp	⊥ bisect opp ∠s bisect ea. other
Square	// & ≅	≅	opp ≅ all ≅ Adj supp	bisect ea. other ≅, ⊥ bisect opp ∠s
Rectangle	// & ≅		all ≅ opp ≅ Adj supp	≅ bisect ea. other
Isosceles Trapezoid	Leg ≅ 1 pr //		Base ∠s ≅ 2 pr supp	≅
Kite		≅	short dist ≅	⊥ bisect opp ∠s longer bisect s/n

Find the measure of each interior angle.



$\angle A \cong \angle D = 90$

$m\angle B = 7(10)+27$

$= 97°$

$m\angle C = 9(10)-7$

$= 83°$

$7x + 27 + 9x - 7 = 180$

$16x + 20 = 180$

$-20 \quad -20$

$16x = 160$

$x = 10$

Classify the following descriptive statements as quadrilaterals or non-quadrilaterals. If the statements describe a non-quadrilateral, explain why.

a. A figure with $m\angle a = 91, m\angle b = 72, m\angle c = 86$, and $m\angle d = 93$.

$91 + 72 + 86 + 93 = 342$

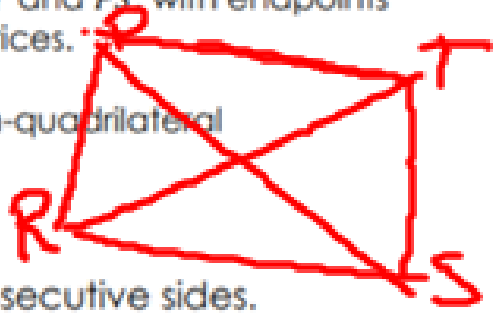
o Quadrilateral ● Non-quadrilateral

$342 \neq 360$

b. A figure with two diagonals, $\overline{RT}$ and $\overline{PS}$, with endpoints that are two nonadjacent vertices.

● Quadrilateral o Non-quadrilateral

R & P are adj.
T & S are adj



c. A figure with only three consecutive sides.

o Quadrilateral ● Non-quadrilateral

4 need

2. Determine the measure of each interior angle below.

a. Parallelogram $TUVW$ with $m\angle T = 10x$ and $\angle U = 20x$

b. Isosceles trapezoid $MNPQ$ with $\angle P \cong \angle Q$, $m\angle Q = 30x$, $\angle M \cong \angle N$, and $m\angle M = 20x$

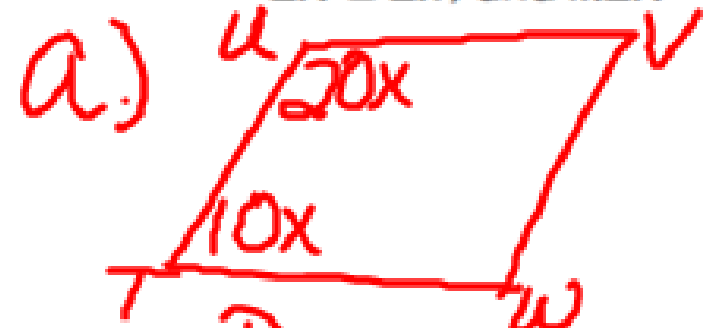
2. Determine the measure of each interior angle below.

a. Parallelogram $TUVW$ with $m\angle T = 10x$ and $\angle U = 20x$

$m\angle T = 60^\circ$ $m\angle U = 120^\circ$

b. Isosceles trapezoid $MNPQ$ with $\angle P \cong \angle Q$, $m\angle Q = 30x$, $\angle M \cong \angle N$, and $m\angle M = 20x$

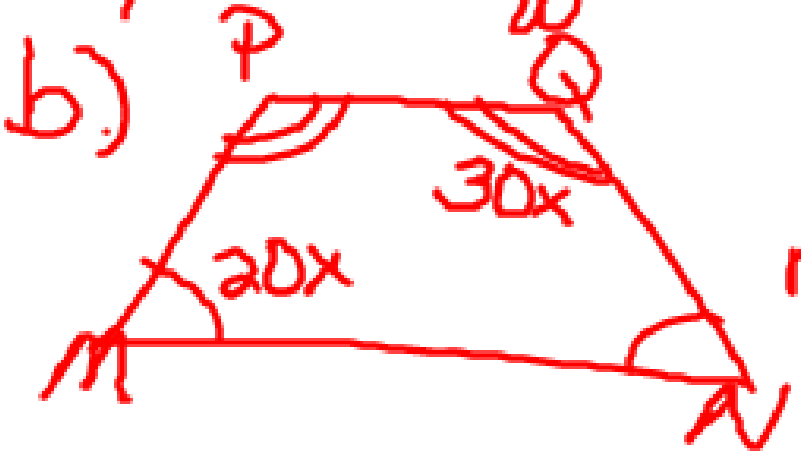
a.)



$30x = 180$

$x = 6$

b)



$50x = 180$

$x = 3.6$

$m\angle P = m\angle Q = 108^\circ$

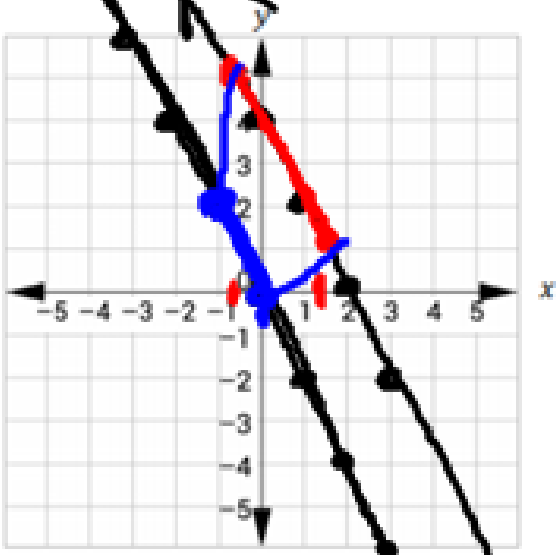
$m\angle M = m\angle N = 72^\circ$

The quadrilateral $ABCD$ has the following characteristics.

$y = mx + b$

$\overline{AD}$ can be represented by the equation $y = -2x$ where $-1 \leq x \leq 0$.

$\overline{BC}$ can be represented by the equation $y = -2x + 4$ where $-0.5 \leq x \leq 1.5$.



a. On the coordinate plane above, graph the figure represented by the information given.

b. Describe the type of quadrilateral represented above.

Trapezoid