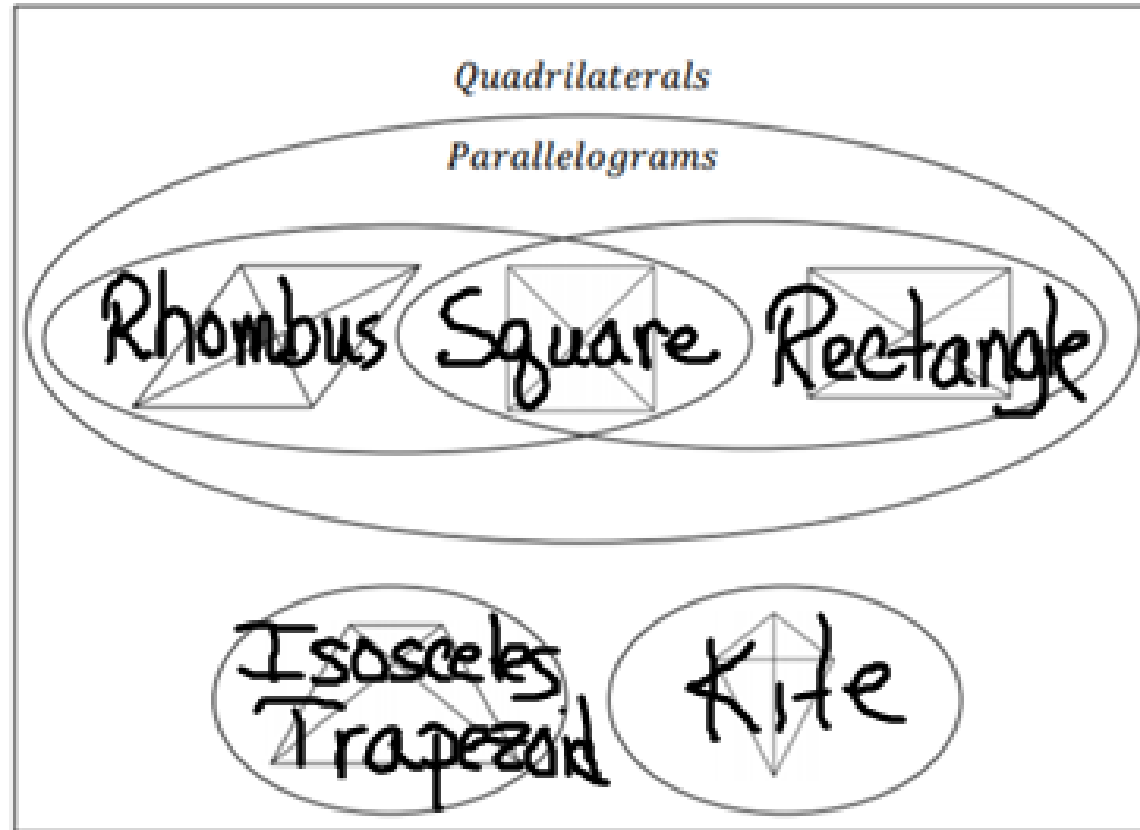
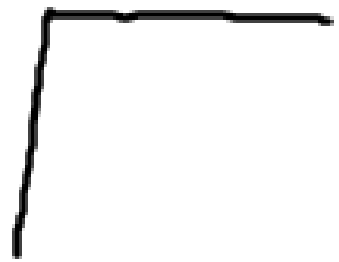


Name the specific quadrilaterals in the Venn Diagram below.





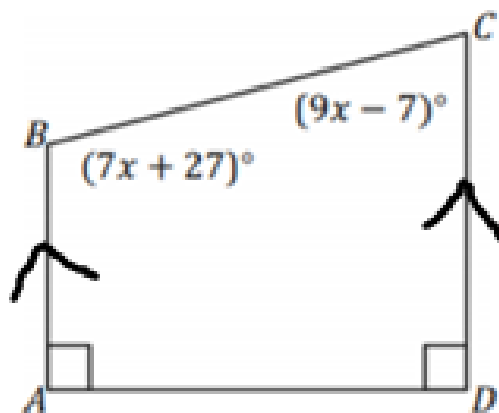
Characteristics of Quadrilaterals				
Polygon	Opposite Sides	Adjacent Sides	Angles	Diagonals
Parallelogram	$\parallel$ $\cong$		opp $\cong$ adj supp	bisect ea other
Rhombus	$\parallel$ $\cong$	$\parallel$	opp $\cong$ adj supp	$\perp$ , bisect opp $\angle$ 's bisect ea other
Square	$\parallel$ $\cong$	$\perp$	opp $\cong$ adj supp all $\cong$	$\perp$ , bisect opp $\angle$ 's bisect ea other, $\cong$
Rectangle	$\parallel$ $\cong$	$\perp$	all $\cong$ opp $\cong$ adj supp	$\cong$ , bisect ea other
Isosceles Trapezoid	bases $\parallel$ legs $\cong$		adj supp base $\angle$ 's $\cong$	$\cong$
Kite	no $\parallel$ no $\cong$	$\cong$	short diag $\perp$ long diag $\cong$	$\perp$ , bisect diag bisect opp $\angle$ 's

Find the measure of each interior angle.

$$\angle A \text{ \& } \angle D = 90$$

$$\begin{aligned}\angle B &= 70 + 27 \\ &= 97^\circ\end{aligned}$$

$$\begin{aligned}\angle C &= 90 - 7 \\ &= 83^\circ\end{aligned}$$



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

$$\begin{aligned}16x + 20 &= 180 \\ -20 &-20\end{aligned}$$

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$$\begin{aligned}16x &= 160 \\ x &= 10\end{aligned}$$

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  $m\angle d = 93$ .

$$91 + 72 + 86 + 96 = 342$$

- 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     Non-quadrilateral



- c. A figure with only three consecutive sides.

- Quadrilateral     Non-quadrilateral

Must have 4 sides

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  $m\angle M = 20x$