## TOPIC 10-3: RHOMBI \& SQUARES

A Rhombus is another special Quadrilateral. What do you already know about a Rhombus?

The properties of a rhombus are...
PROPERTY: PICTURE:

1. Opposite sides are
2. Opposite sides are
$\qquad$ .
3. Opposite angles are
$\qquad$ .

4. Consecutive angles are
$\qquad$ .
5. Diagonals $\qquad$ each other.
6. All four sides are
$\qquad$ .
7. Diagonals are
8. Diagonals bisect

EXAMPLE 1 If $\mathrm{m} \angle \mathrm{RST}=67^{\circ}$, find $\mathrm{m} \angle \mathrm{RSW}$.


RSTV is a rhombus.

EXAMPLE 2 Find $\mathrm{m} \angle S V T$ if $\mathrm{m} \angle S T V=135^{\circ}$.


RSTV is a rhombus.

EXAMPLE 3 What is $m \angle S R V$ if $m \angle W R V=(5 x+5)^{\circ}$ and $\mathrm{m} \angle \mathrm{WRS}=(7 \mathrm{x}-19)^{\circ}$ ?


RSTV is a rhombus.

EXAMPLE 4
In rhombus DLMP, $D M=24, m \angle L D O=43^{\circ}$, and $D L=13$. Find each of the following.
a) $\mathrm{OM}=$
b) $\mathrm{m} \angle \mathrm{DOL}=$ $\qquad$

c) $\mathrm{m} \angle \mathrm{DLO}=$ $\qquad$
d) $\mathrm{m} \angle \mathrm{DML}=$ $\qquad$ e) $D P=$

A SQUARE is a special parallelogram that has all of the combined properties of:
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EXAMPLE 5 MATH is a square.
a) If $\mathrm{MA}=8$, then $\mathrm{AT}=$ $\qquad$
b) $\mathrm{m} \angle \mathrm{HST}=$ $\qquad$
c) $\mathbf{m} \angle \mathrm{MAT}=$ $\qquad$

d) $\mathbf{m} \angle \mathrm{MHS}=$ $\qquad$
e) If $\mathrm{HS}=2$, then $\mathrm{HA}=$ $\qquad$ and $\mathrm{MT}=$

