Review 6.6 - Trapezoids & Kites

Name: _____

TH is an isosceles trapezoid with bases $\overline{MA}$ and $\overline{TH}$. Use given information to solve each problem.

1. If $MA = 34$ and $HT = 20$, find CD.

2. If $HT = 17.6$ and $CD = 28.6$ find MA.

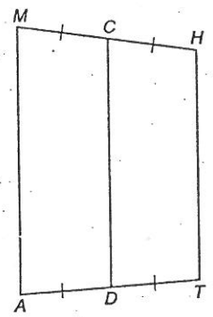
3. If $MA = 23.9$ and $CD = 16.4$, find HT.

4. If $CD = x + 12$ and $MA + HT = 4x + 3$, find x.

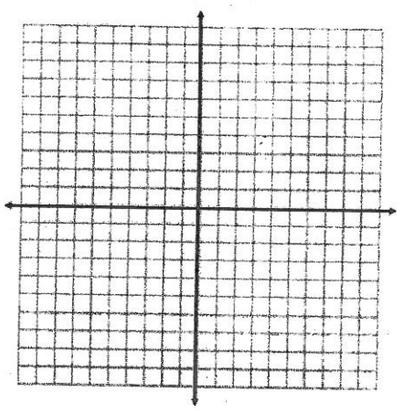
5. If $m\angle TAM = 63$, find $m\angle HMA$.

6. If $m\angle HCD = 52$, find $m\angle TDC$.

7. If $m\angle DCM = 2x$, find $m\angle CMA$ in terms of x.



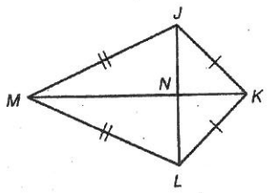
8. $\overline{VW}$ is the median of a trapezoid that has bases $\overline{MN}$ and $\overline{PO}$, with V on $\overline{OM}$ and W on $\overline{PN}$. If the vertices of the trapezoid are $M(2, 6)$, $N(4, 6)$ $P(10, 0)$, and $O(0, 0)$, find the coordinates of V and W.



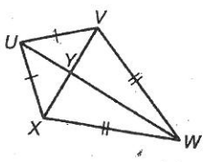
9. $\overline{VW}$ is the median of a trapezoid that has bases $\overline{MN}$ and $\overline{PO}$, with V on $\overline{PM}$ and W on $\overline{ON}$. If four of the points are $M(5, 10)$, $N(9, 10)$, $V(3, 7)$, and $W(11, 7)$, find the coordinates of P and O.

11. Three sides of a kite measure 8 inches, 10 inches, and 8 inches. What is the perimeter of the kite?

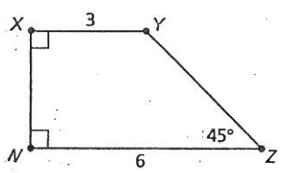
12. In kite $JKLM$, $m\angle JMN = 25°$. Find $m\angle NJM$.



13. In kite $UVWX$, $m\angle XUV = 84°$, and $m\angle WVX = 68°$. What is $m\angle VWX$?



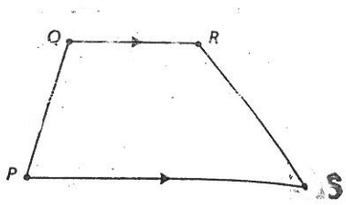
14. Find the measures of $\angle Y$ and the length of midsegment.



15. Identify the pair of segments or pair of angles of trapezoid $PQRS$ as bases, consecutive sides, legs, diagonals, base angles, or opposite angles.

a. $\overline{QR}$ and $\overline{PS}$ b. $\overline{PQ}$ and $\overline{RS}$ c. $\overline{PQ}$ and $\overline{QR}$

d. $\overline{QS}$ and $\overline{PR}$ e. $\angle Q$ and $\angle S$ f. $\angle S$ and $\angle P$



Logical Reasoning **In Exercises 16-20, complete the statement with *always, sometimes,* or *never*.**

16. A trapezoid is [?] a parallelogram.

17. The bases of a trapezoid are [?] parallel.

18. The base angles of an isosceles trapezoid are [?] congruent.

19. The legs of a trapezoid are [?] congruent.

20. The length of the midsegment of a trapezoid is [?] half the sum of the lengths of the bases.