6.3 Homework

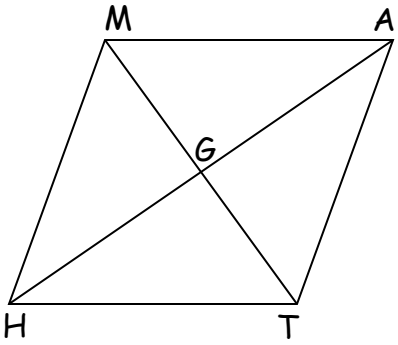
Name Key

MATH is a parallelogram. State the property that justifies each conclusion.

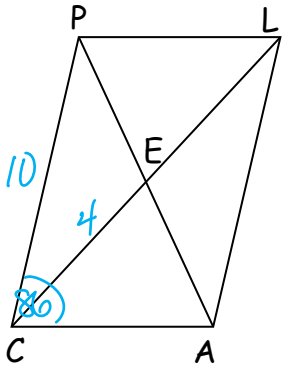
1. $\overline{MG} \cong \overline{GT}$ NO

2. $m\angle MHT + m\angle HTA = 180°$ NO

3. $\overline{MH} \parallel \overline{AT}$ NO



PLAC is a parallelogram. Find each value.



4. If CP = 10, AL = 10

5. If EC = 4, LE = 4

6. If $m\angle PCA = 86°$, $m\angle PLA$ = 86

   and $m\angle LPC$ = 94

7. If $m\angle PCA = (2x + 5)°$ and $m\angle LAC = (3x + 10)°$,

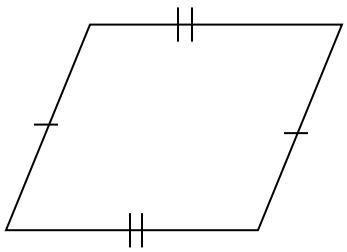
   $m\angle PCA$ = $2(33)+5 = 71°$

   and $m\angle LAC$ = $180° - 71° = 109°$

$2x+5+3x+10=180$
$5x+15=180$
$5x=165$
$x=33$

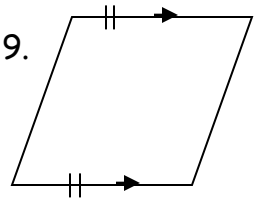
State whether the given quadrilateral is a parallelogram based on the given information. Justify your answers.

8.



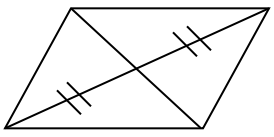
yes, opp sides ≅

9.



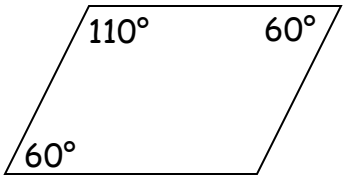
yes, one side both // and ≅

10.



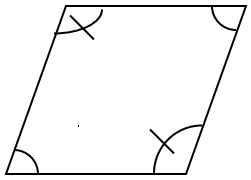
NO

11.



NO

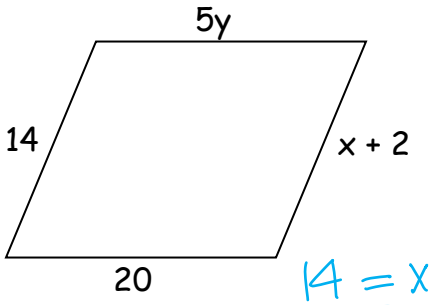
12.



yes, opp ∠s are ≅

Find the values of x and y that make each quadrilateral a parallelogram.

13.



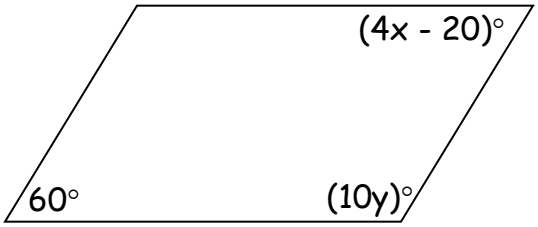
$14 = x+2$

$12 = x$

$5y = 20$

$y = 4$

14.



$60 = 4x - 20$

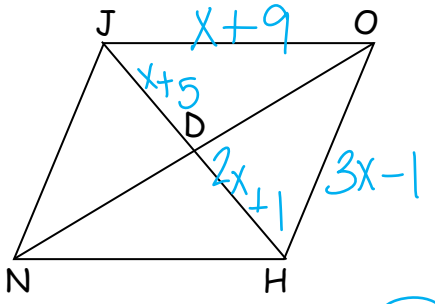
$80 = 4x$

$20 = x$

$10y = 120$

$y = 12$

15. Find the perimeter of the parallelogram.



JO = x + 9, OH = 3x - 1, JD = x + 5, DH = 2x + 1

$x+5 = 2x+1$

$4 = x$

$4+9 = 13$

$3(4)-1 = 11$

$P = 13 + 13 + 11 + 11 = 48$

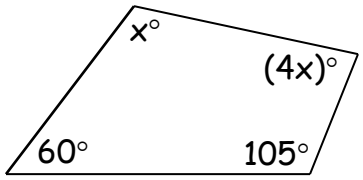
16. Solve for x in each figure.

$x + 4x + 105 + 60 = 360$

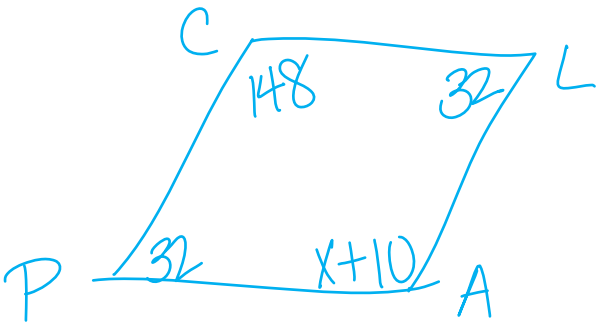
$5x + 165 = 360$

$5x = 195$

$x = 39$



17. Find the measure of each angle in quadrilateral CLAP if $m\angle A = x + 10$, and $m\angle P = 32$.



$148 = x + 10$

$x = 138$