# Geometry Workbook

## Quadrilaterals

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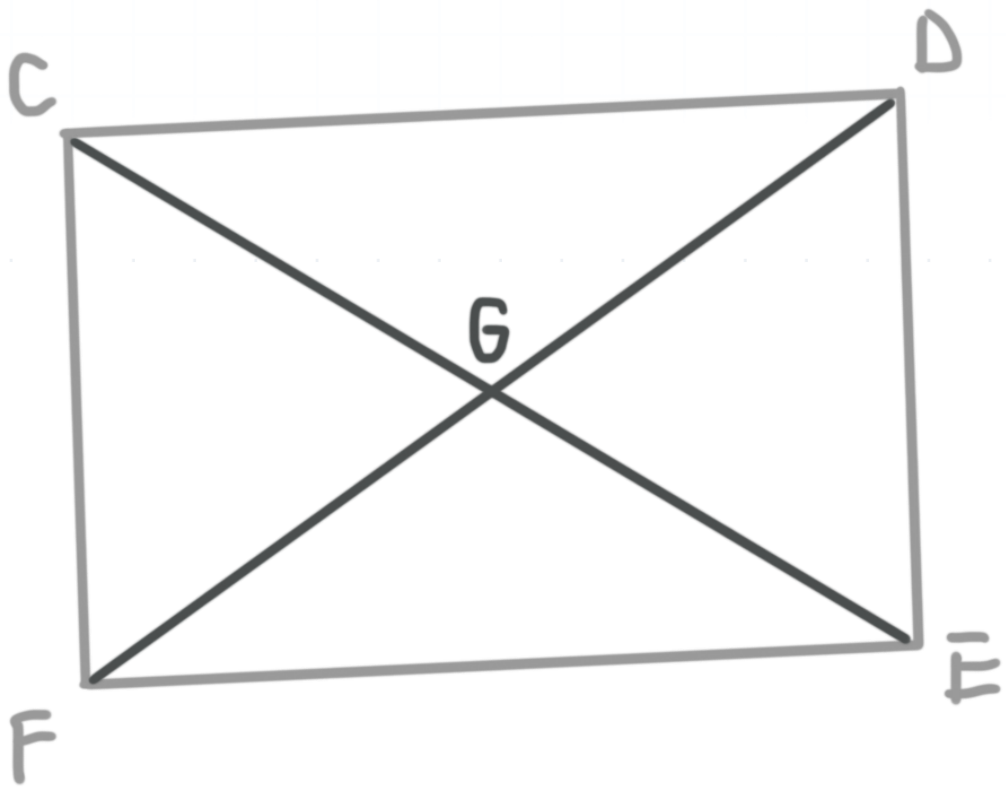
MATH

## MEASURES OF QUADRILATERALS

■ 1. A rectangle has a width of $6$ inches and diagonal with length $10$ inches. Find the perimeter of the rectangle.

■ 2. Classify quadrilateral $ABCD$ with vertices at $A(1, -3)$, $B(5,0)$, $C(10,0)$, and $D(6, -3)$.

■ 3. $CDEF$ is a rectangle with diagonals intersecting at $G$. $CG = 2x + 1$, $DG = x + 4$, $FG = 4y - 1$, and $EG = y + 5$. Find $FD$.

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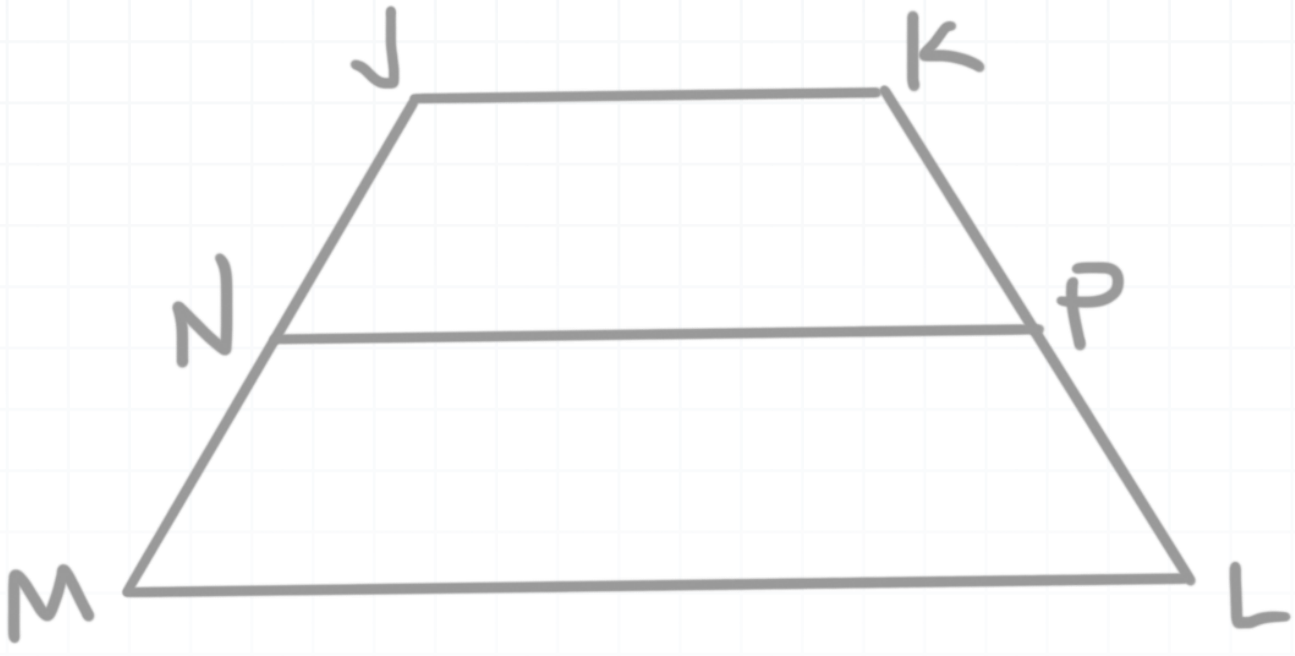
4. $JKLM$ is an isosceles trapezoid with median $\overline{NP}$. $MJ = 14$, $m\angle MLP = 72$, $NP = 16$, and $ML = 20$. Find $KP$, $m\angle MJK$, and $JK$.

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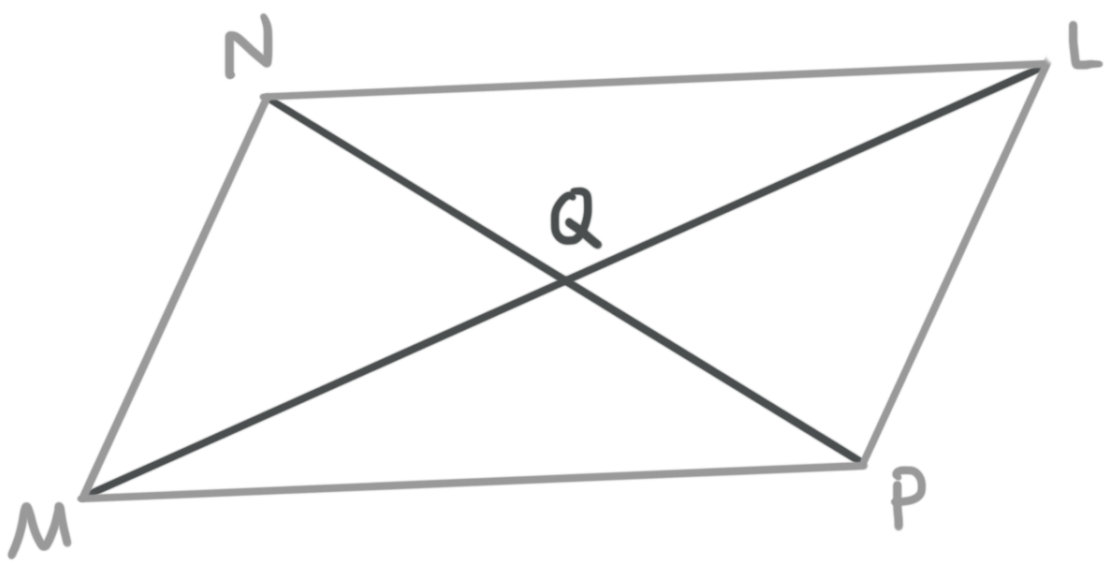
## MEASURES OF PARALLELOGRAMS

■ 1. $ABCD$ is a parallelogram with $m\angle A = 2x + 10$, $m\angle B = y - 5$, and $\angle C = 100$. Find the values of $x$ and $y$.

■ 2. $EFGH$ is a rhombus with $FH = 24$ and $GE = 10$. Find the perimeter of $EFGH$.

■ 3. $JKLM$ has vertices $J(-3,2)$, $K(3,0)$, $L(3,-6)$, and $M(-3,-4)$. Determine whether $JKLM$ is a parallelogram by checking if it has two sets up opposite sides that are congruent.

■ 4. $NLPM$ is a parallelogram with diagonals intersecting at point $Q$. $m\angle MNP = 85$, $m\angle MQP = 115$, and $m\angle MNL = 135$. Find $m\angle PML$.

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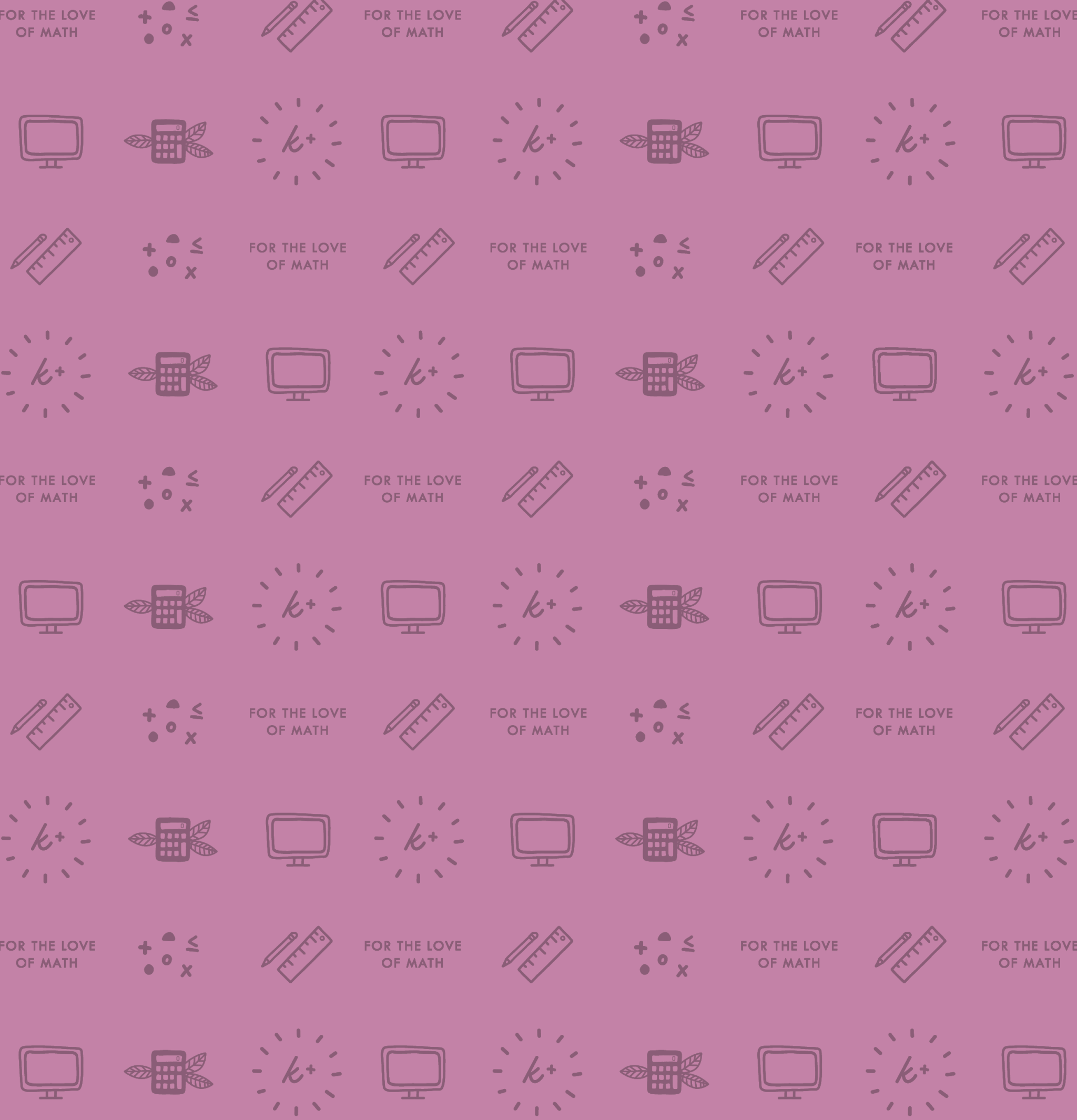


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