



Geometry Workbook

Triangles

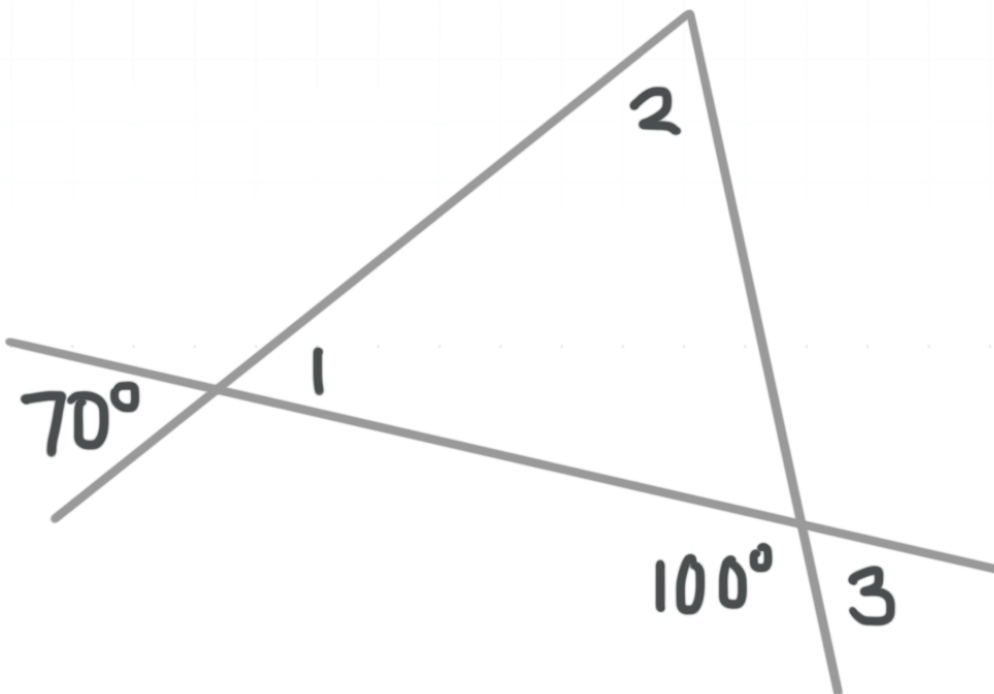
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MATH

INTERIOR ANGLES OF TRIANGLES

■ 1. $\triangle LMN$ is a right, isosceles triangle where $\angle M$ is the vertex angle. Find $m\angle L$, $m\angle M$, and $m\angle N$.

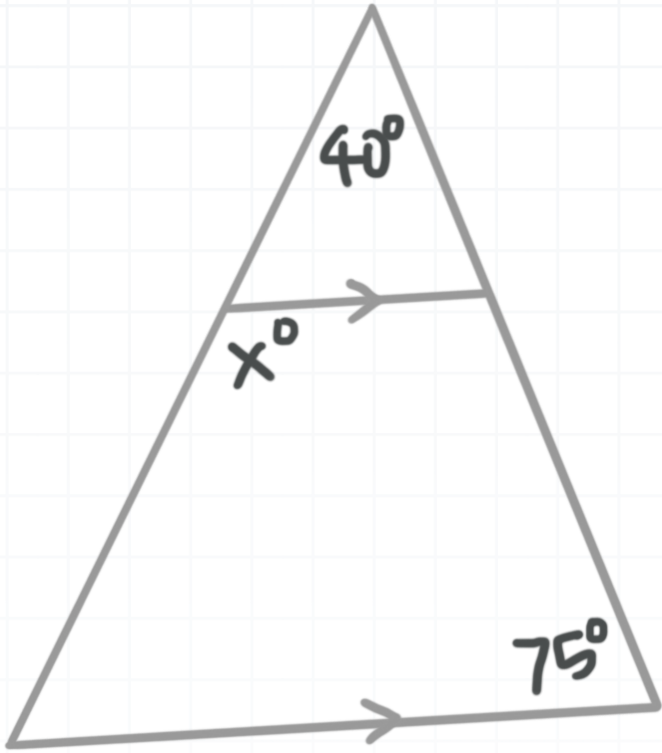
■ 2. $\triangle ABC$ has $m\angle A = 3x + 5$, $m\angle B = 10x + 5$, and $m\angle C = 4x$. Find the value of x and determine whether this is an obtuse, acute, or right triangle.

■ 3. Find $m\angle 1$, $m\angle 2$, and $m\angle 3$ from the figure.



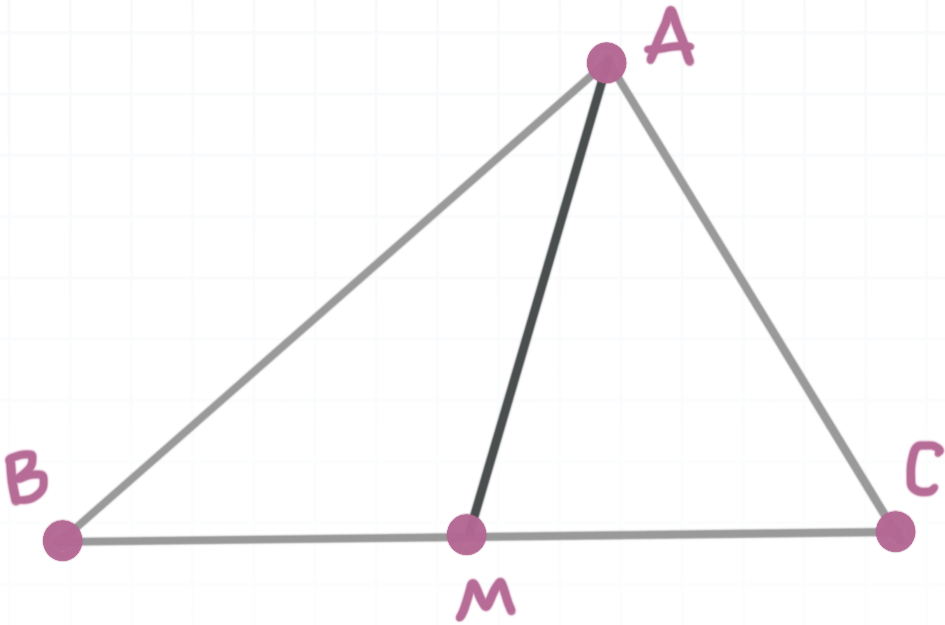
■ 4. Find the value of x from the figure.





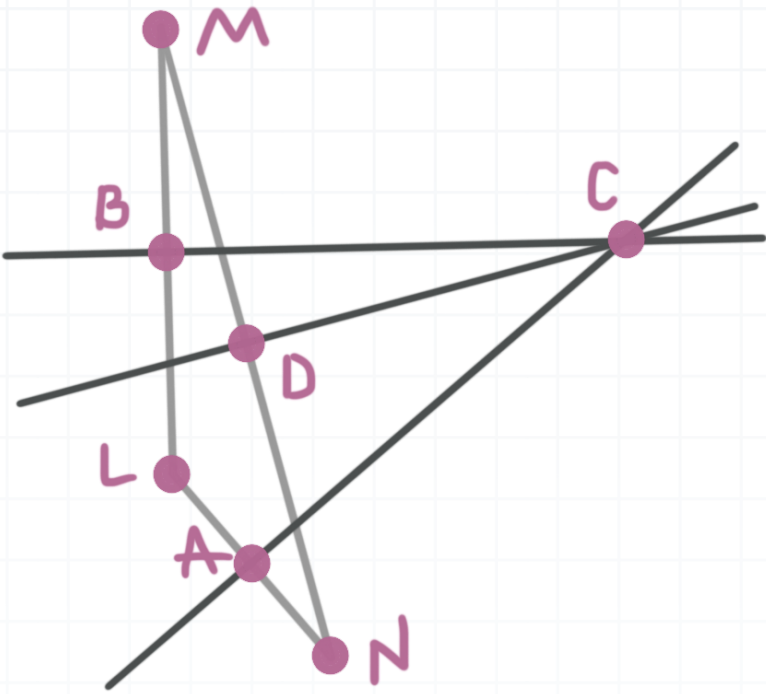
PERPENDICULAR AND ANGLE BISECTORS

- 1. \overline{AM} is an angle bisector of $\triangle ABC$. $m\angle BMA = 108$ and $m\angle MBA = 40$. Find x if $m\angle CAM = 2x + 12$.

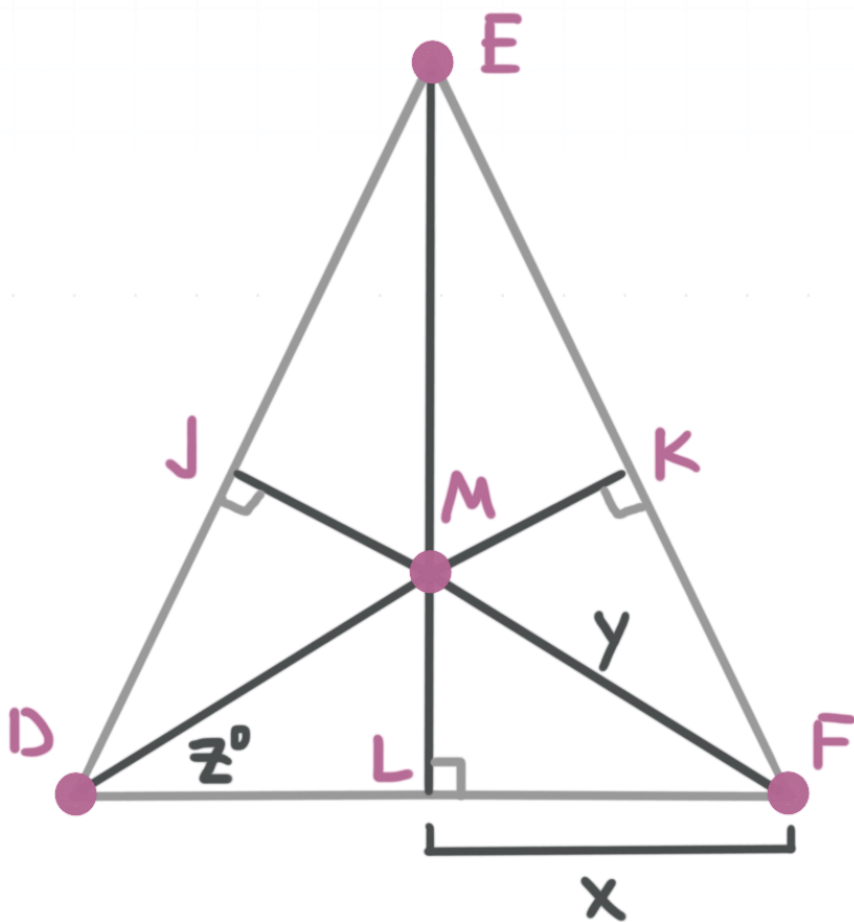


- 2. \overline{AC} , \overline{DC} , and \overline{BC} are perpendicular bisectors of $\triangle NLM$. Give the special name for C and find the length of ND if $NM = 14x - 22$ and $DM = 3x + 1$.





3. Find the values of x , y , and z , given M is an incenter, $MK = 6$, $FK = 8$, and $m\angle EDF = 80$.



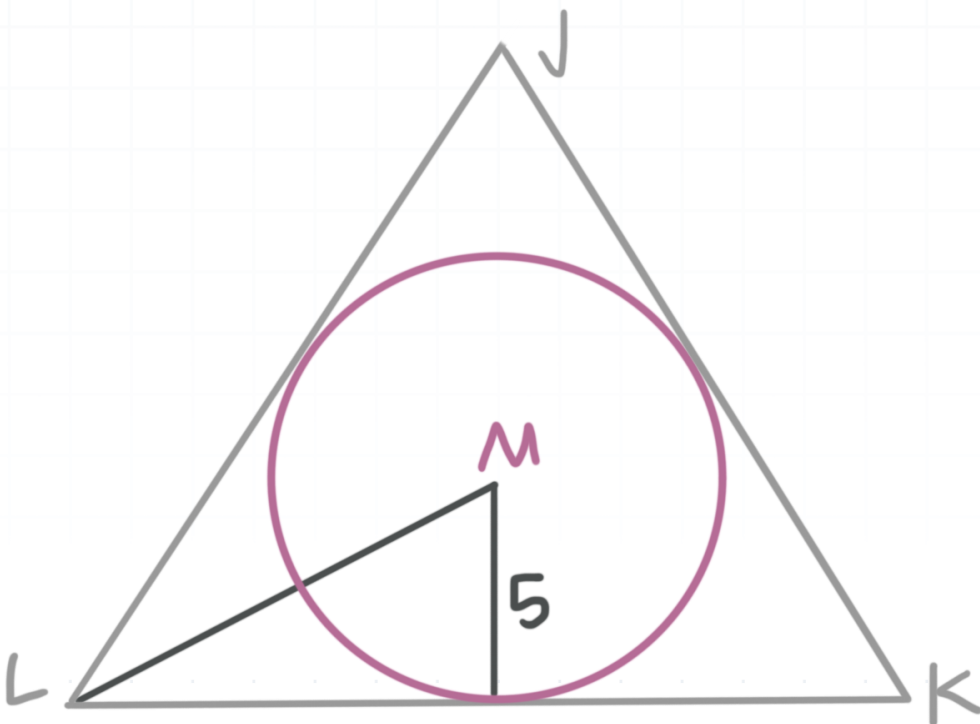
- 4. $\triangle ABC$ has coordinates $A(-3,1)$, $B(3,3)$, and $C(2, -2)$. Write the equation for the perpendicular bisector of \overline{AB} .



CIRCUMSCRIBED AND INSCRIBED CIRCLES OF A TRIANGLE

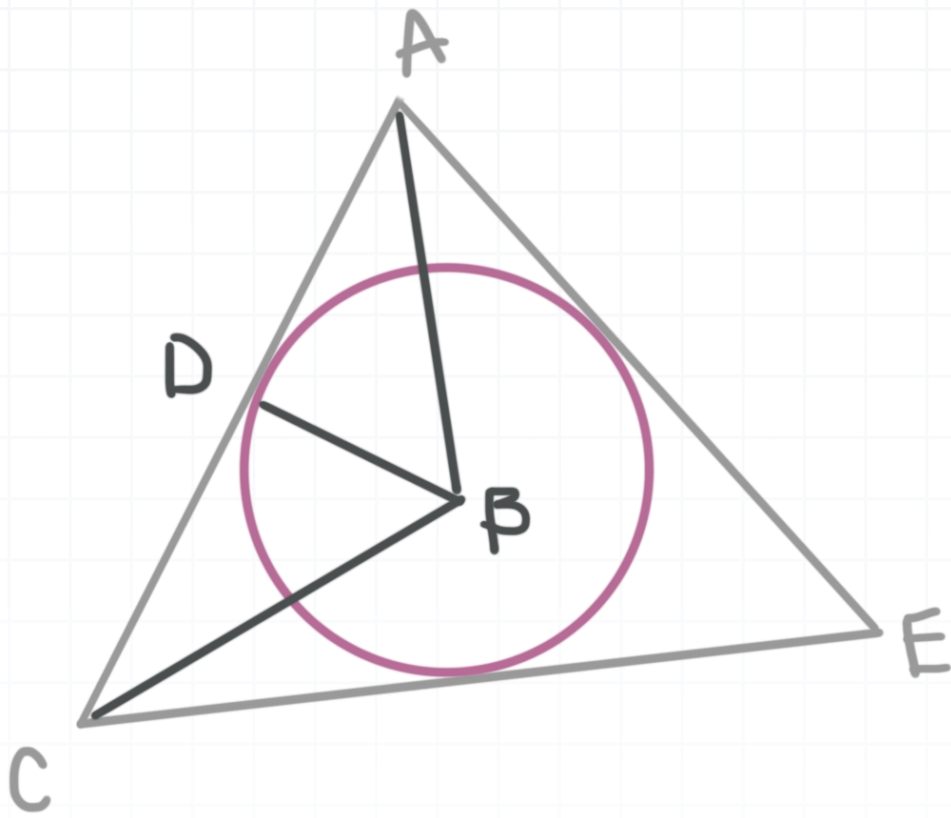
■ 1. Equilateral triangle ABC is inscribed in $\odot D$. Find $m\angle ADC$.

■ 2. $\triangle JKL$ is equilateral and is circumscribed about $\odot M$. The radius of $\odot M$ is 5. Find the perimeter of $\triangle JKL$.



■ 3. If $AB = 12$, find the length of the radius of $\odot B$.





4. R is the incenter of $\triangle PML$. Find $m\angle PMR$.

