

TOPIC 5-3: ISOSCELES & EQUILATERAL TRIANGLES

EXAMPLE 1

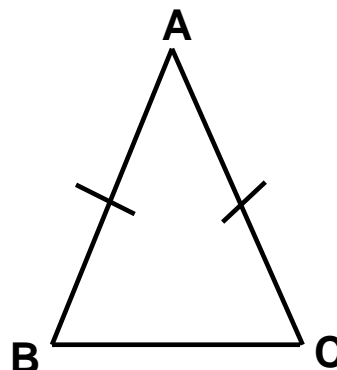
Classify this triangle by sides:

legs _____

base _____

base angles _____

vertex angle _____



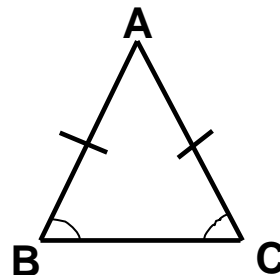
OPPOSITE/ ADJACENT ANGLES VIDEO

Isosceles Triangle Theorem: If two sides of a triangle are congruent, then the angles opposite them are congruent.

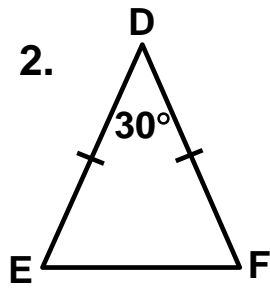
Converse of the Isosceles Triangle Theorem: If two angles of a triangle are congruent, then the sides opposite those angles are congruent.

If $\overline{AB} \cong \overline{AC}$, then _____.

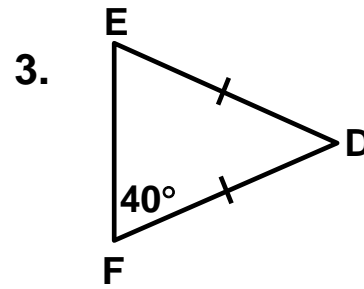
If $\angle C \cong \angle B$, then _____.



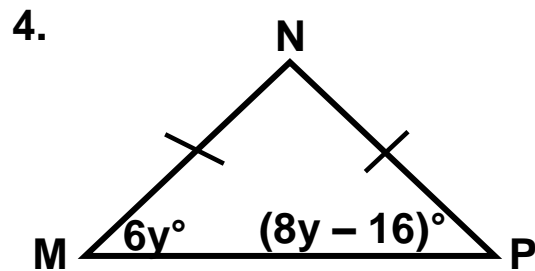
EXAMPLES: Find each angle measure.



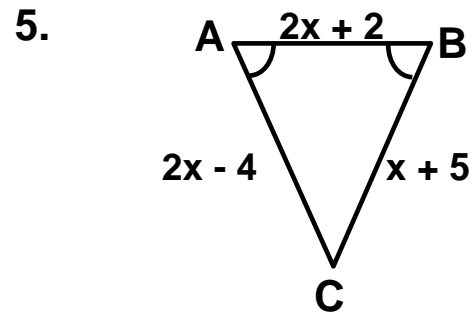
$$m\angle F = \underline{\hspace{2cm}}$$



$$m\angle D = \underline{\hspace{2cm}}$$



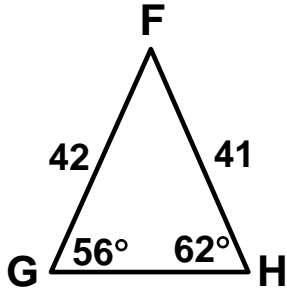
$$m\angle P = \underline{\hspace{2cm}}$$



$$AC = \underline{\hspace{2cm}}$$

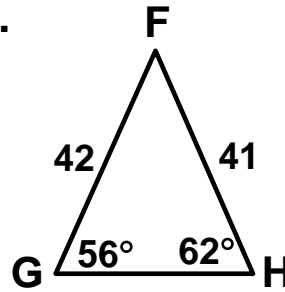
Find the measure of each side.

6.



$m\angle F =$ _____

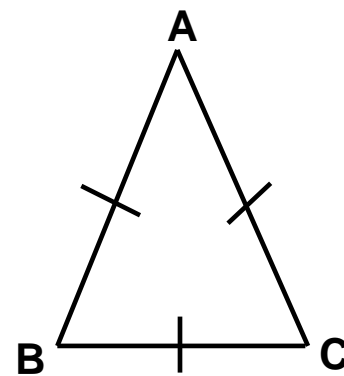
7.



$GH =$ _____

Classify this triangle by sides:

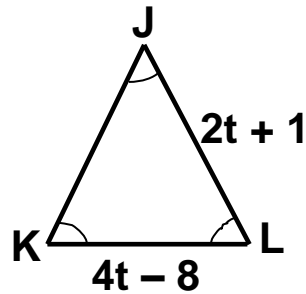
Classify this triangle by angles:



Equilateral Triangle Corollary: If a triangle is equilateral, then it is equiangular.

Equiangular Triangle Corollary: If a triangle is equiangular, then it is equilateral.

$\triangle JKL$ is equiangular. Find JL .



$JL =$ _____