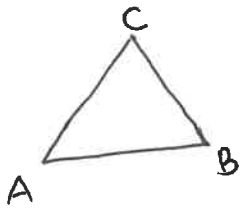
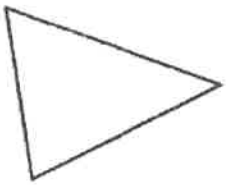


vertices : points A, B, & C

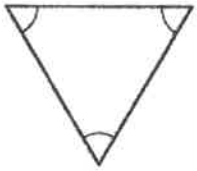
$\triangle ABC$

Geometry CP
4.1 Classifying Triangles

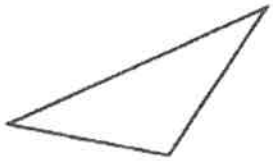
classifying by Angles:



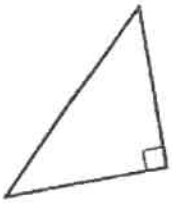
Acute
less than 90°



Equiangular
all congruent



Obtuse
1 angle is greater than 90°

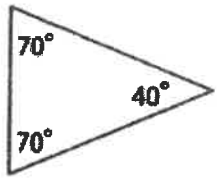


Right
1 angle = 90°

*Be as specific as possible!

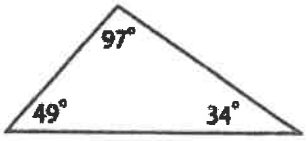
1. Classify the following triangles by angles:

a.



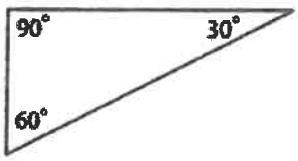
Acute

c.



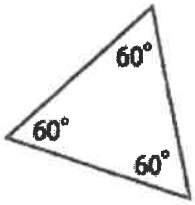
Obtuse

b.



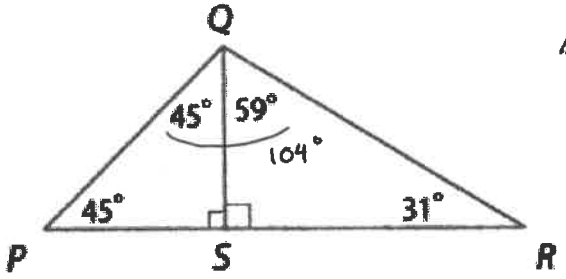
Right

d.



Equiangular

2. Classify ΔPQR by angles:

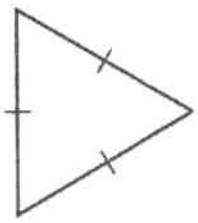


$\Delta QRS \rightarrow$ Right

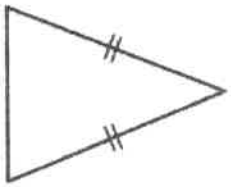
$\Delta QSP \rightarrow$ Right

$\Delta PQR \rightarrow$ Obtuse

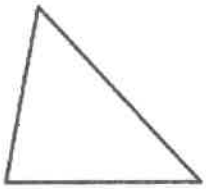
classify by sides:



Equilateral
all sides congruent



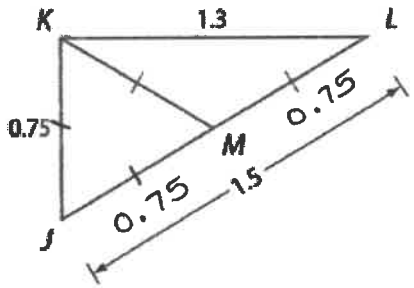
Isosceles
2 sides congruent



Scalene
no sides congruent

3. If point m is a midpoint of $\overline{JL}$, classify the triangles by its sides:

$\overline{JM} \cong \overline{ML}$

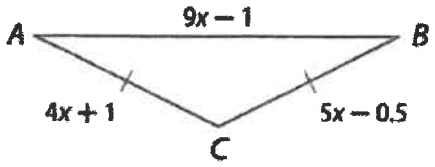


$\Delta JKM \rightarrow$ Equilateral

$\Delta KML \rightarrow$ Isosceles

$\Delta JKL \rightarrow$ Scalene

4. Find the measures of the sides of the isosceles triangle below:



$\overline{AC} \cong \overline{BC}$

$4x + 1 = 5x - 0.5$

$-4x \quad -4x$

$1 = x - 0.5$

$1.5 = x$

$AC = 4x + 1$

$AC = 4(1.5) + 1$

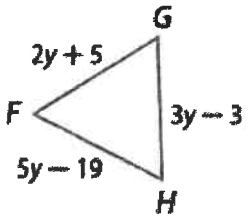
$\boxed{AC = 7}$

$\boxed{BC = 7}$

$AB = 9(1.5) - 1$

$\boxed{AB = 12.5}$

5. Find the measures of the sides of the equilateral triangle below:



★ all sides congruent ★

$\overline{FG} \cong \overline{FH}$

$2y + 5 = 5y - 19$

$-2y \quad -2y$

$5 = 3y - 19$

$+19 \quad +19$

$\frac{24}{3} = \frac{3y}{3}$

$8 = y$

$FG = 2y + 5$

$FG = 2(8) + 5$

$\boxed{FG = 21}$

$\boxed{GH = 21}$

$\boxed{FH = 21}$