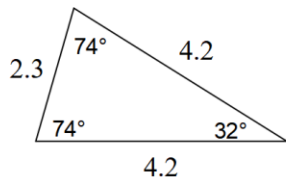
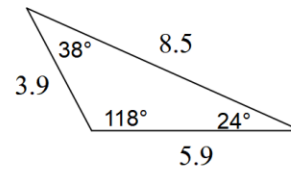


Classify each triangle by its angles and sides.

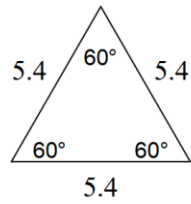
11)



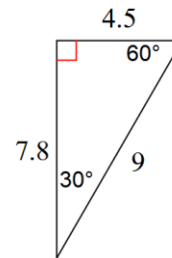
12)



13)



14)



Complete the Triangle Sum Theorem Card Sort: Record the angles you found for each triangle on the lines provided.

Triangle 1: _____

Triangle 2: _____

Triangle 3: _____

Triangle 4: _____

Complete the Isosceles Base Angle Card Sort: Draw the triangle that matches the description.

Isosceles triangle whose base angles are 26° .

Isosceles triangle whose base angles are 43° .

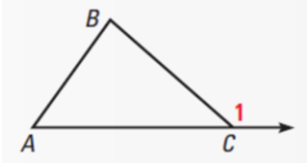
Isosceles triangle whose base angles are 64° .

Isosceles triangle whose base angles are 77° .

Exterior Angle Theorem:

vimeo.com/258002093

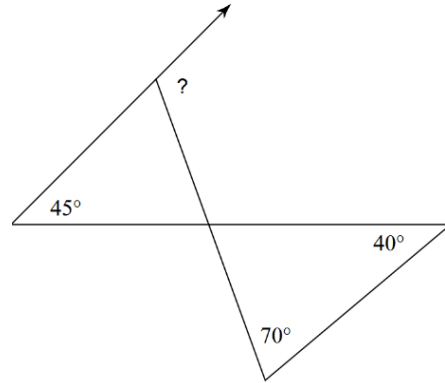
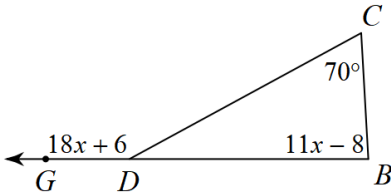
The exterior angle of a triangle is equal to the sum of the two non-adjacent interior angles of the triangle.



$$m\angle A + m\angle B = m\angle 1$$

Solve for x.

17)



Midsegment Theorem:

vimeo.com/258002107

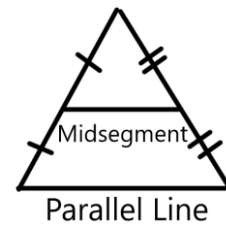
The midsegment of a triangle is half the length of its parallel side.

Equation:

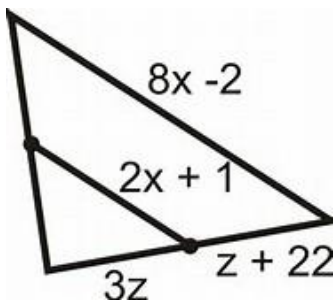
$$2(\text{midsegment}) = \text{parallel side}$$

What is a midsegment?

Midsegment: a line that connects the midpoints of two sides of a triangle.



Find the value of x and z if the segment in the triangle is a midsegment.

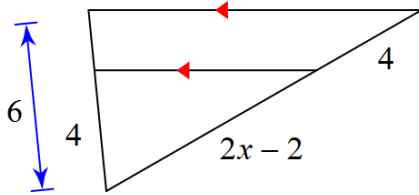
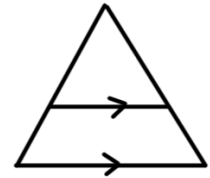


Proportionality Theorem:

vimeo.com/258002119

A line parallel to one side of a triangle divides the other two proportionally and its converse.

*When you see proportion remember to set up equal fractions.



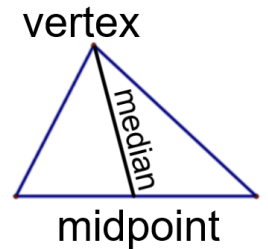
Centroid Theorem:

vimeo.com/258002053

The medians of a triangle intersect at a point that is $\frac{2}{3}$ the distance from the vertex to the midpoint of the opposite side.

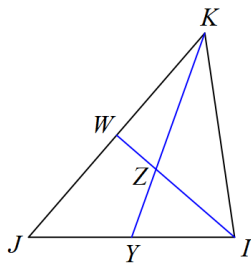
What is median?

Median: a line segment that connects the vertex of a triangle to the midpoint of its opposite side.

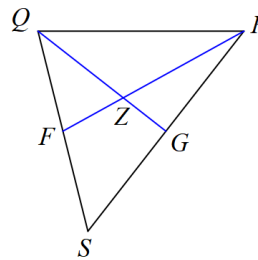


Each figure shows a triangle with one or more of its medians.

15) Find x if $KZ = 3x + 4$ and $ZY = x + 5$

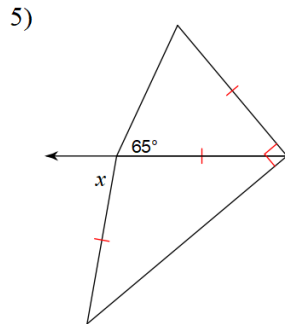
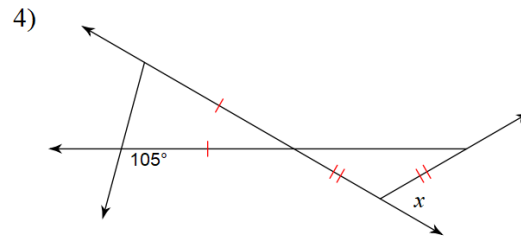
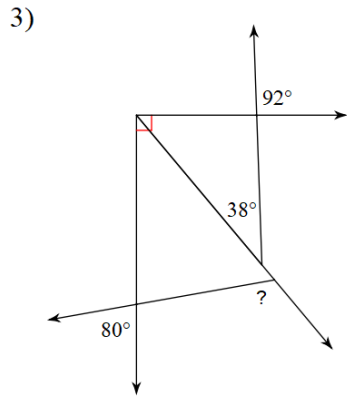
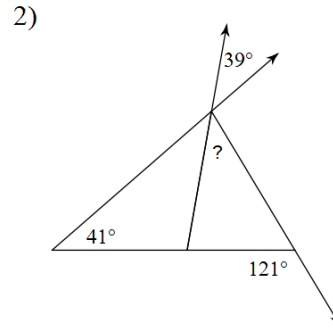
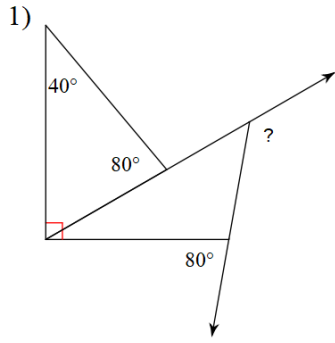


16) Find x if $QG = 5x + 3$ and $ZG = 2x - 1$



Extra Practice for Exterior Angle, Triangle Sum, and Isosceles Base Angle

Find the measure of the indicated angle, or x . Then classify all triangles shown.



6) $m\angle 2 = x + 60$

