# TODAY'S AGENDA: October 17th+

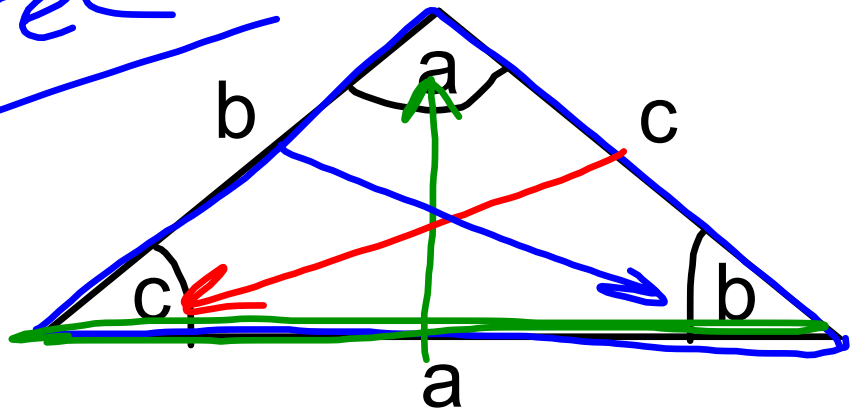
- Work on Khan Academy Mission:
- Complete Mission Foundation Skills
- Today's Objective: Whole-Group Lessons:
- Triangles and Polygons

- Standards:
- CCSS.MATH.CONTENT.HSG.CO.A.1:
- Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

- Continue With Your Mission Assignments

# Triangles and Their Properties

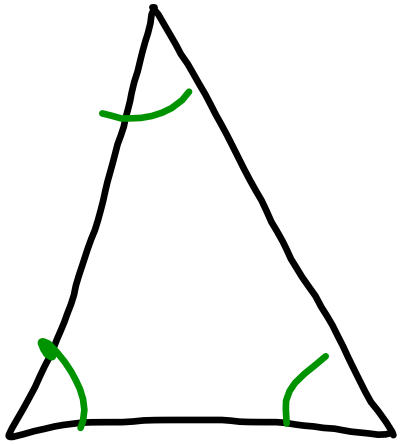
Tri = three




angles
-3 angles
add to 180°

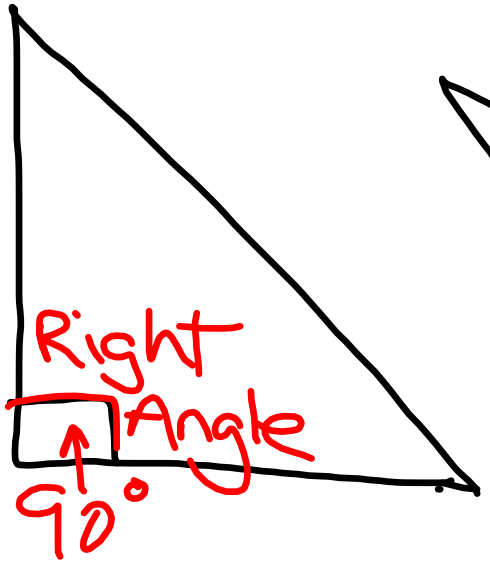
sides
-can be measured

# Types of Triangles

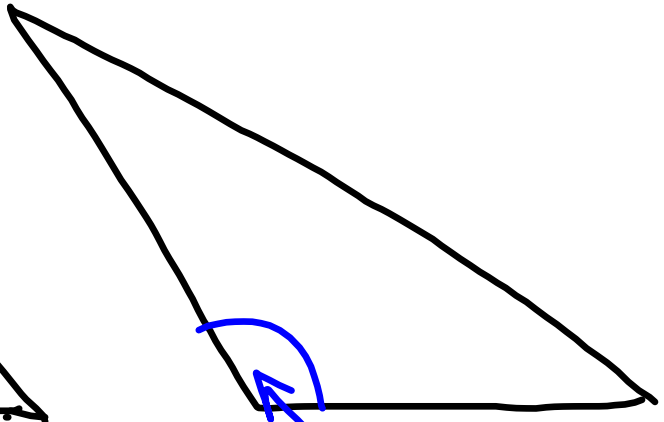


Acute Triangle

All acute angles



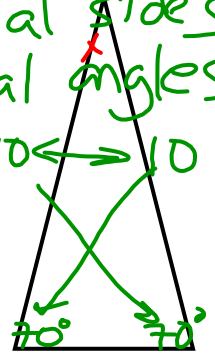

Right Triangle




Obtuse Triangle

# Acute Triangles

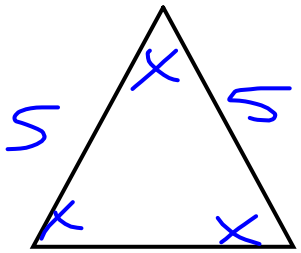
2 equal sides
2 equal angles




2

Isosceles Triangles

$70+70+x=180$
$140+x=180$
$-140$
$x=40°$




3 equal sides
3 equal angles
Equilateral Triangle

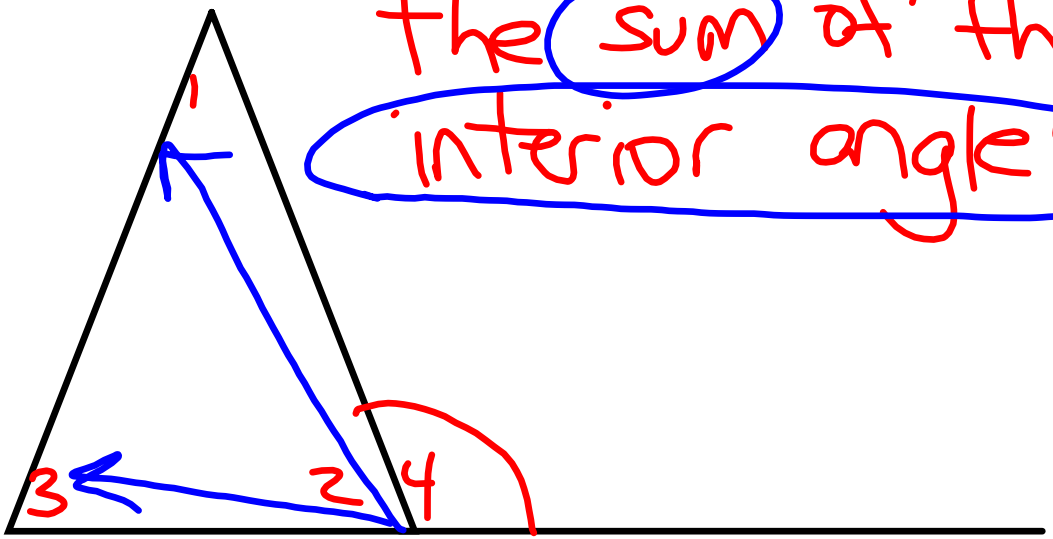
$x+x+x=180°$

$\frac{3x}{3}=\frac{180}{3}$

$x=60°$

# Exterior Angle of a Triangle

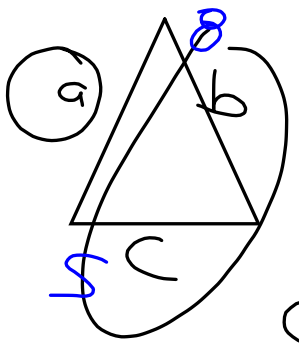
An exterior angle is equal to the sum of the opposite interior angles.




$\measuredangle 4 = \measuredangle 1 + \measuredangle 3$

# Triangle Side Lengths Rule

Def: Any side of a triangle must be less than the sum of the ~~the~~ other two sides, and greater than the difference of the other two.




$a \leq b + c$

$a \geq b - c$

$a \leq 8 + 5$

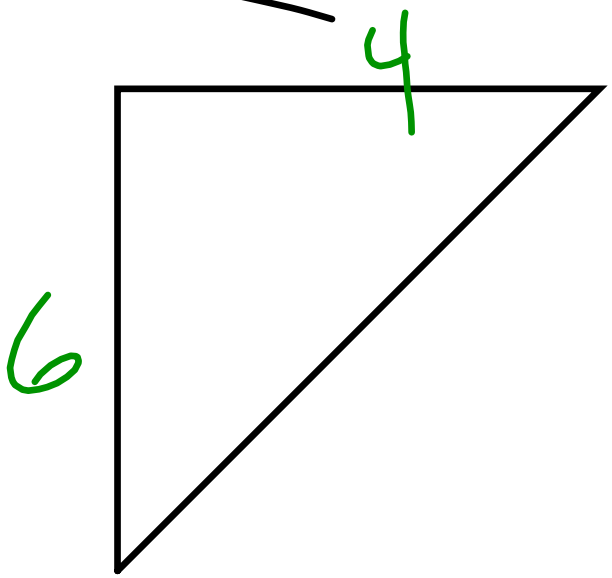
$a \leq 13$

$a \geq 8 - 5$

$a \geq 3$

# Area of a Triangle

$$A = \frac{1}{2}bh$$

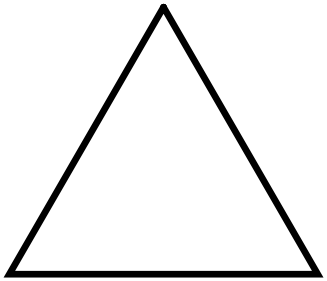


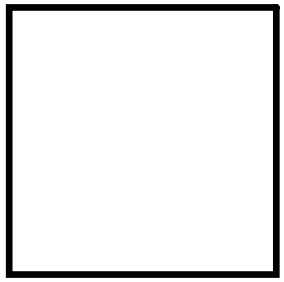

$$A = \frac{1}{2}(4)(6)$$

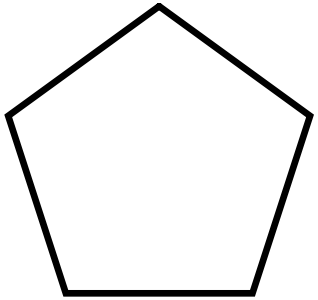
$$= \frac{1}{2}(24)$$

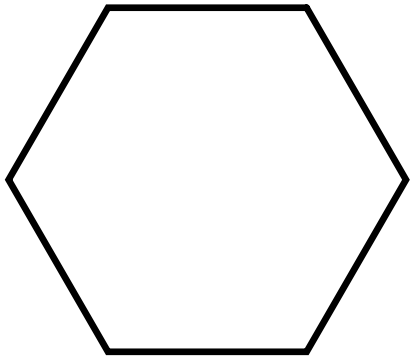
$$A = 12$$

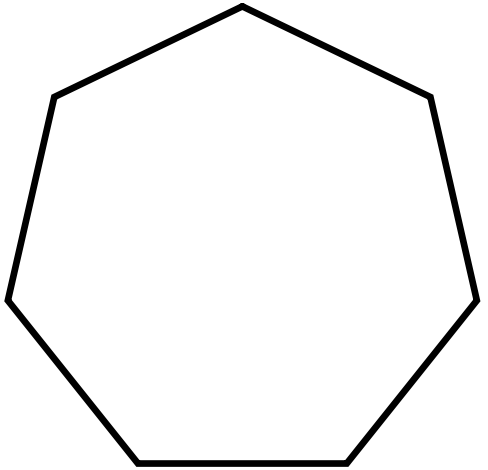
# Polygons and Their Properties



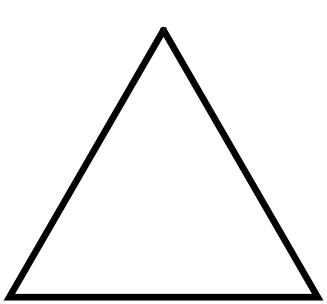


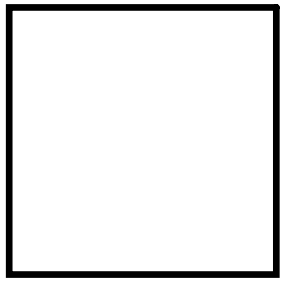


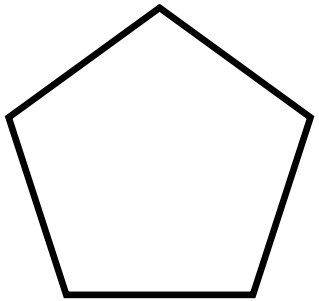


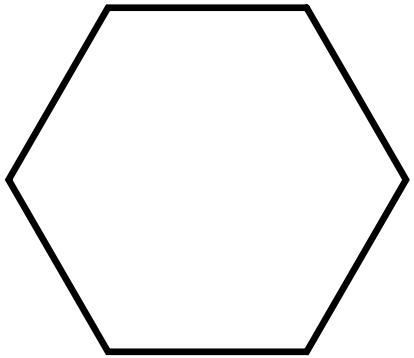


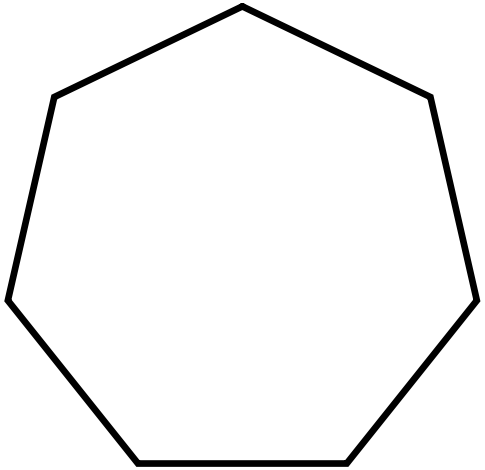
# Polygons and Their Properties



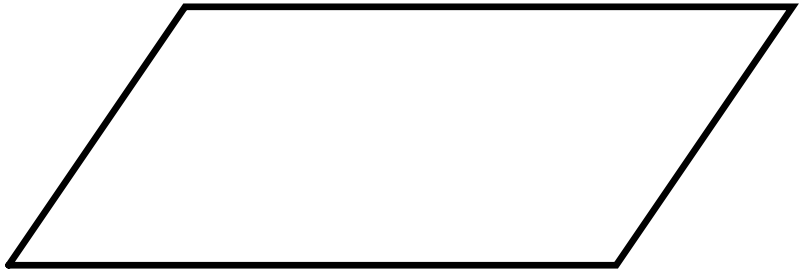








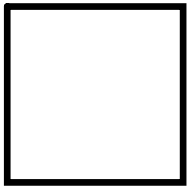
# Parallelograms and Their Properties



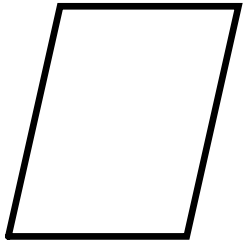
# Rectangles, Squares, and Rhombus

## Rectangles

## Squares

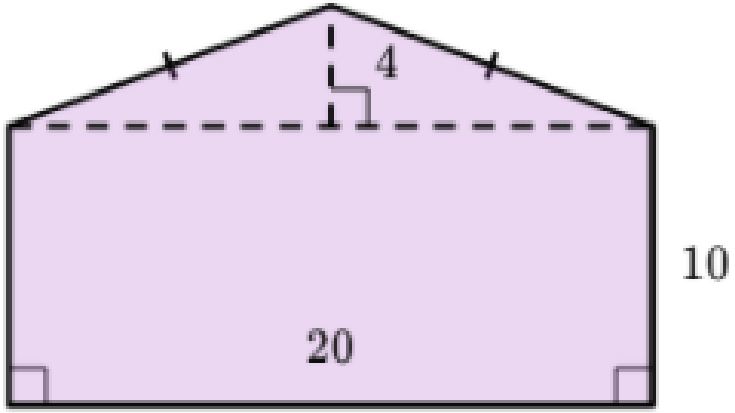


## Rhombus

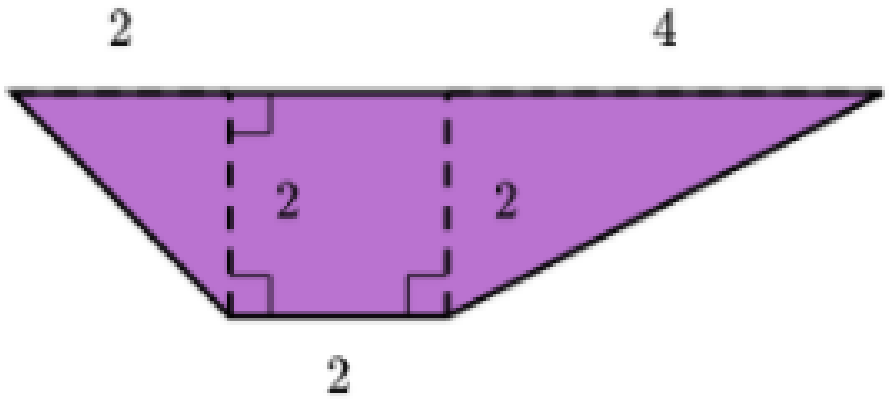


# Area of Trapezoids

# Area of Composite Shapes



# Area of Composite Shapes



# Skills You Should Be Working on:

1. Finding angle measures using triangles
2. Angles of a polygon
3. Triangle side length rules
4. Quadrilateral types
5. Quadrilateral angles
6. Area of triangles
7. Area of parallelograms
8. Area of trapezoids
9. Area of composite shapes