TODAY'S AGENDA: October 17th+

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

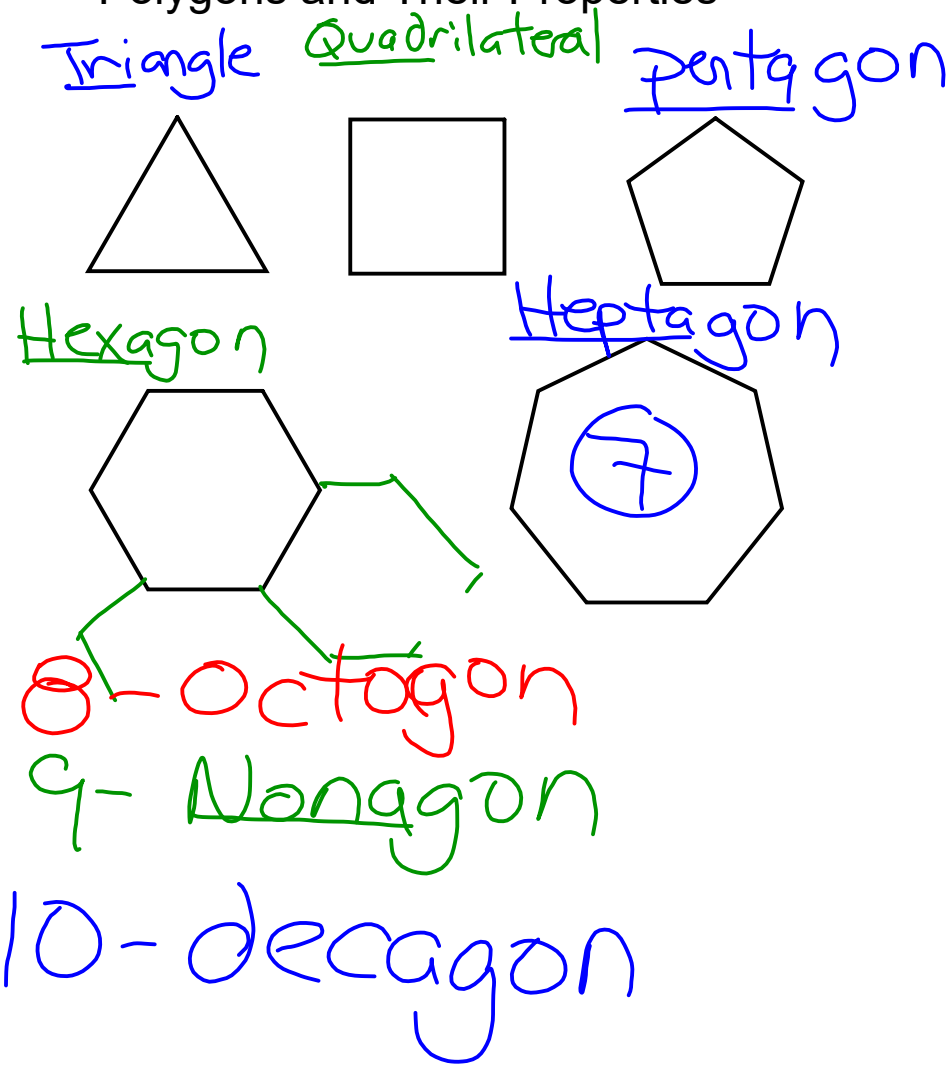
- Continue With Your Mission Assignments

Polygons

Definition:

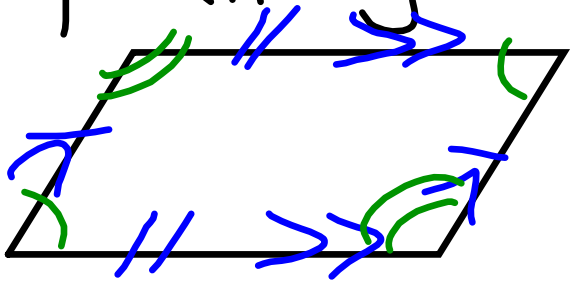
A closed shape with three or more sides.

Polygons and Their Properties

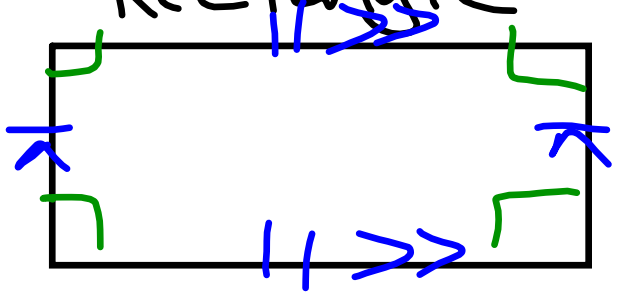


Quadrilaterals – All have 4 sides

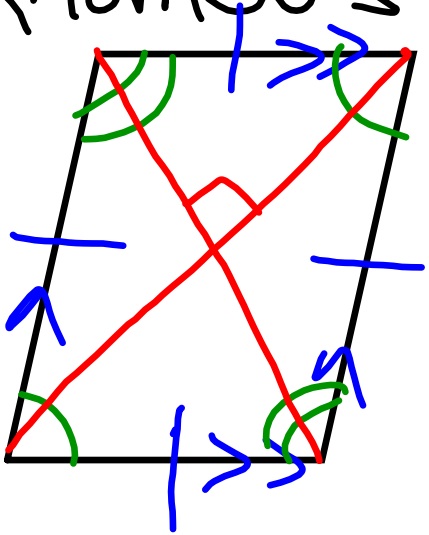
parallelogram



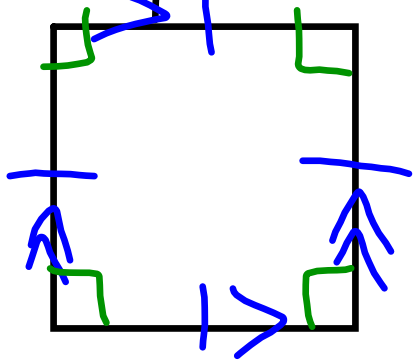
Rectangle



Rhombus

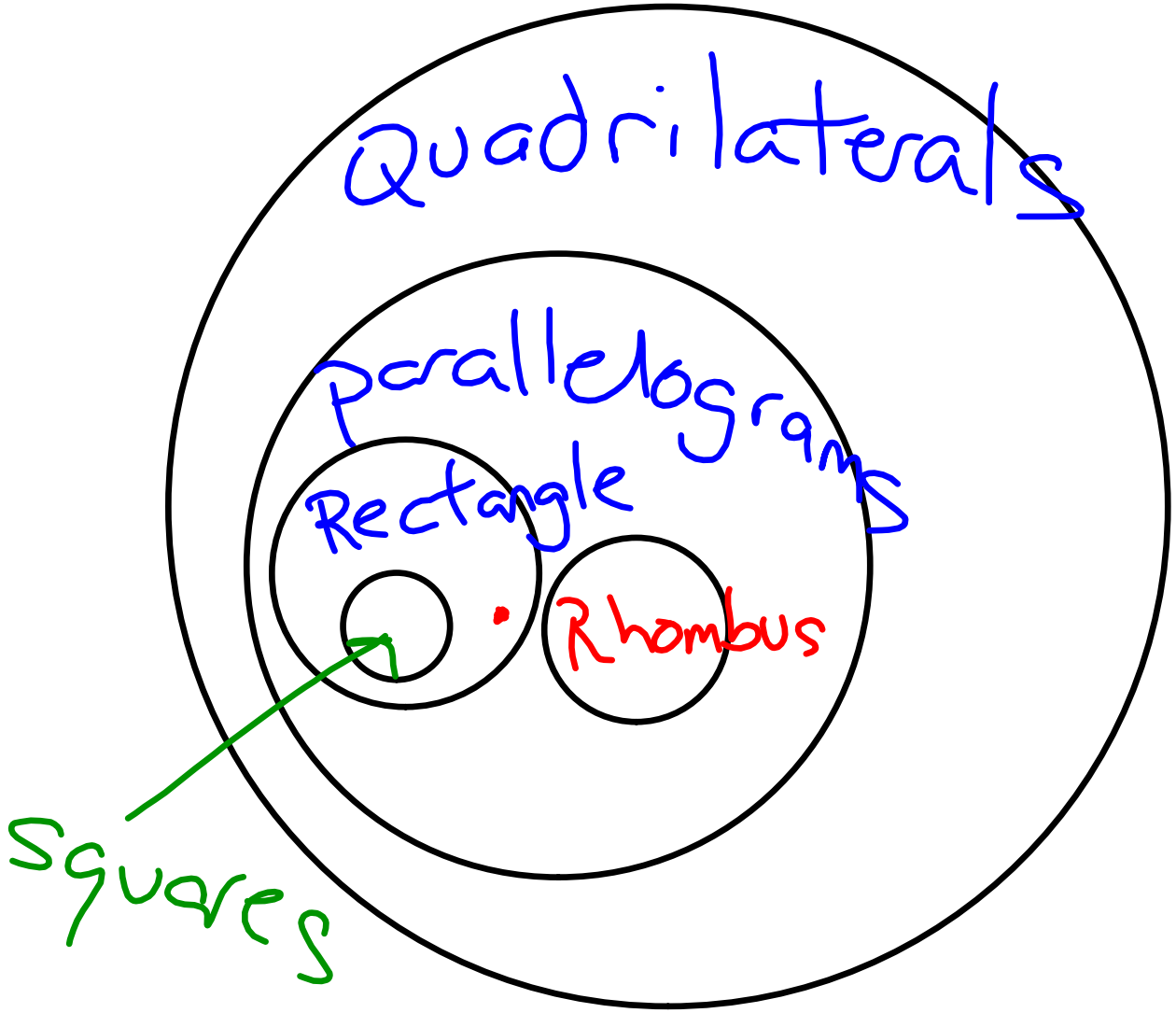


Square

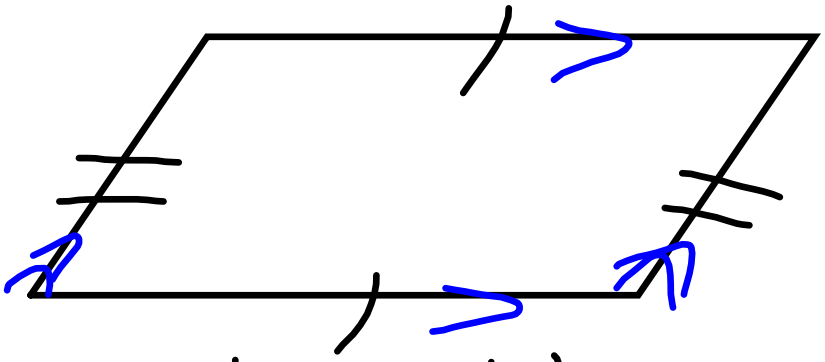


∧-parallel

—: same size


Quadrilaterals
Parallelograms
Rectangle
Rhombus
Squares

Parallelograms and Their Properties



① Opposite sides are $\cong$

② Opposite sides are $\parallel$

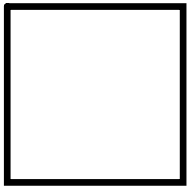
↑ parallel

Rectangles, Squares, and Rhombus

Rectangles

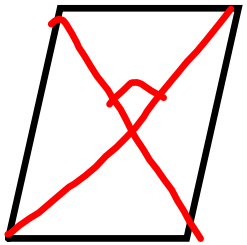
- opp. side ≅
- opp. side ||
- all ∡'s ≅ and right

Squares



- all sides ≅
- opp sides ||
- all ∡'s are ≅ and right

Rhombus



- all sides ≅
- opp. sides ||
- diagonals ⊥

perpendicular

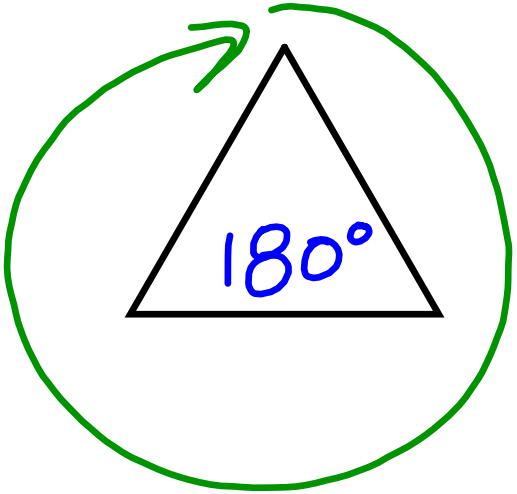
Polygons: Interior & Exterior Angles

Sum

Sum = 360°

# of sides = n

(n-2)180°



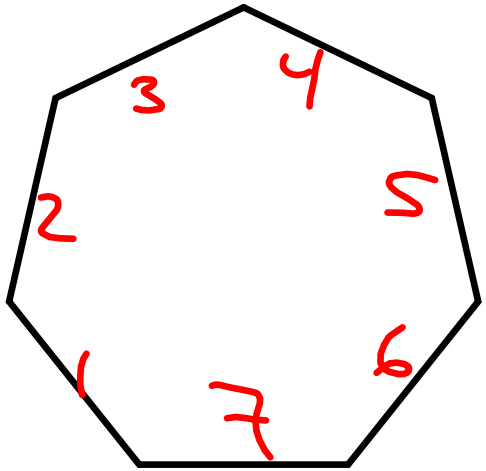
(3-2)

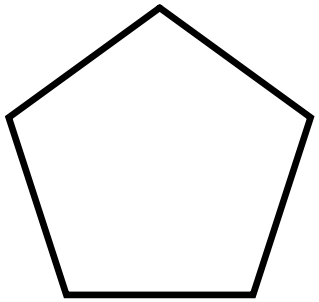
1 (180)°

180

Hexa-6

Hepta-7





5-2

3·180

540°

5(180)-360

7-2

5(180)

900°

$(n-2)180$

$n \cdot 180 - 360$

Triangle

$a = \frac{1}{2} b h$

Area of Trapezoids

$\frac{(5+3)}{2} 11$

$4 \cdot 11$

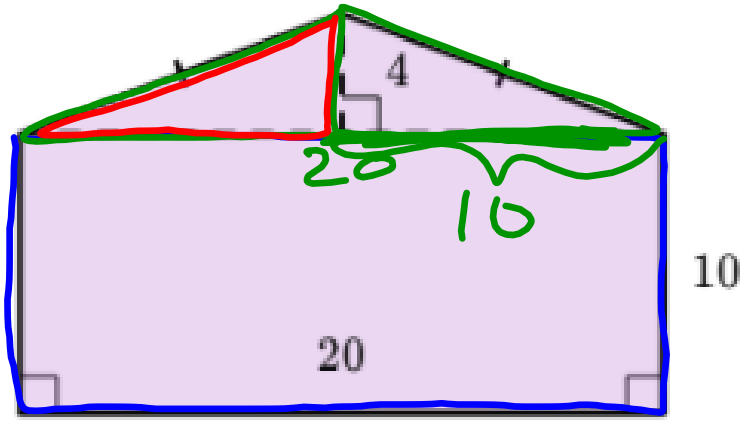
$a = 44$

average = $\frac{\text{add}}{\#\text{of things}}$

$a = \frac{(b_1 + b_2)}{2} h$

Area of Composite Shapes

→ a group of stuff



$a_\square = l \times w$

$= 20 \times 10$

$= 200$

$a_\triangle = \frac{1}{2}bh$

$= \frac{1}{2}(20)(4)$

$= 10 \cdot 4$

$= 40$

$200 + 40 = 240$

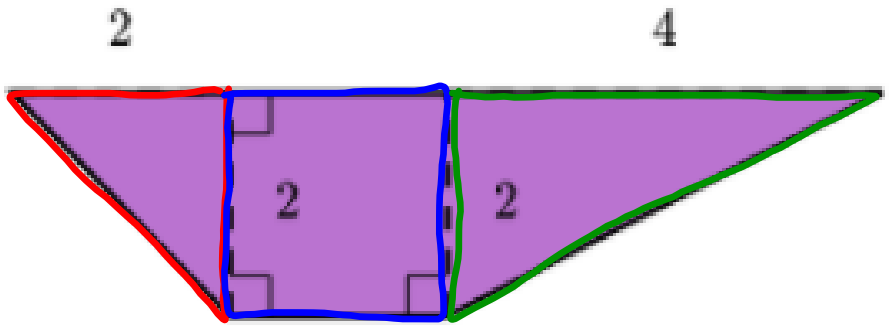
$a_\triangle = \frac{1}{2} 10 \cdot 4$

$= 5 \cdot 4$

$2(20)$

40

Area of Composite Shapes



$a_{\square} = l \times w$

$= 2 \times 2$

$= 4$

$a_{\triangle} = \frac{1}{2} b h$

$= \frac{1}{2} 2 \cdot 2$

$= 1 \cdot 2$

$= 2$

$a_{\triangle} = \frac{1}{2} b h$

$= \frac{1}{2} 4 \cdot 2$

$= 2 \cdot 2$

$= 4$

$a_{\text{⬠}} = 10$

$4 + 2 + 4 = 10$

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