Unit 1- Shapes and Designs
Investigation 3: Designing Triangles and Quadrilaterals STUDY GUIDE

Things we need to know:

- Be able to draw a geometric shape given conditions
  - Triangles
    - The sum of any two sides must be greater than the third
    - SSS, SAS, AAA, ASA, AAS
  - Quadrilaterals
    - The sum of the smallest three sides must be greater than the fourth
    - Properties of:
      - Squares
      - Rectangles
      - Rhombuses
      - Parallelograms
      - Trapezoids

- Be able to use facts about complementary, supplementary, adjacent, and vertical angles to solve for missing angles
- Know what parallel lines are
  - Parallel lines are lines in a plane that never meet

- Know what a transversal is
  - A transversal is a line that intersect two other lines
• Know what **vertical angles** are
  - Vertical angles are the opposite pairs of angles that are formed when two lines are intersected
    \[ \angle a \text{ and } \angle c \text{ are vertical angles} \]
    \[ \angle b \text{ and } \angle d \text{ are vertical angles} \]

• Know what interior angle and exterior angle sums are
• Know how to solve for one exterior angle in a regular polygon