1. In the group of shapes at the left below, you find four Ys. None of the figures in the middle group are Ys. Your task is to determine which of the four figures in the group at the right are Ys.

(a) Think about how you plan to go about determining which of the figures are Ys. Then discuss your strategy with other members of your group. Describe your strategy.

(b) Now, determine which of the figures in the group at the right are Ys. Justify your choices.

(c) Write down a definition for Ys.

Solution. Done in class

2. For the following questions, if the answer is yes, draw a picture, if it is no, briefly explain why not.

(a) Can a right triangle also be an isosceles triangle?
   Solution. Yes, since a right triangle can have two congruent sides.

(b) Can a quadrilateral have 3 obtuse angles?
   Solution. No, since the sum of the interior angles must sum to 360°.

(c) Can a rhombus have 4 acute angles?
   Solution. No, since the sum of the interior angles of the quadrilateral must sum to 360°.

(d) Can a square also be a rectangle?
   Solution. Yes, by our definition a square satisfies the definition of a rectangle. We defined a rectangle as a parallelogram with four right angles.

3. Draw a Venn diagram to illustrate how squares, rectangles, and rhombuses are related.

Solution.