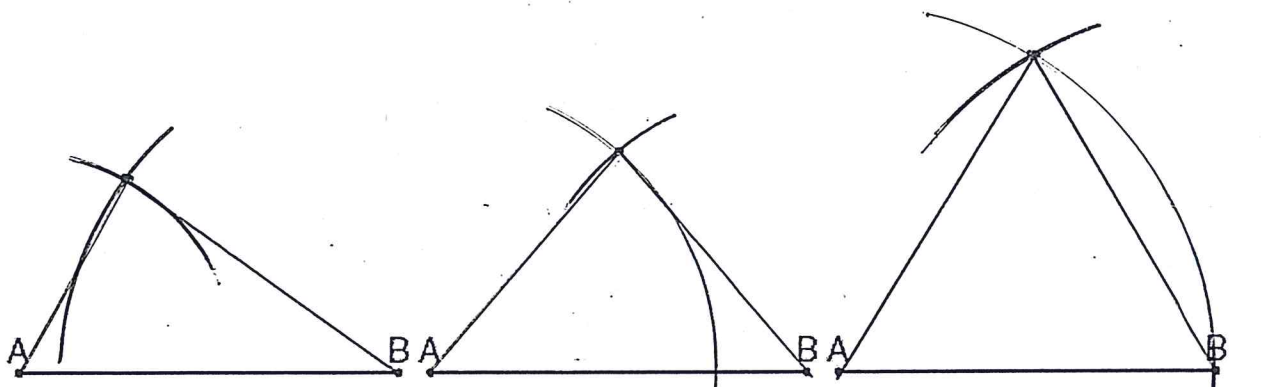
Name Schlansky
Mr. Schlansky

Date _____
Geometry

Constructing Triangles

1. Using a compass and straightedge, and $\overline{AB}$ below, construct the following triangles:



Scalene

unequal arcs not using the length of $\overline{AB}$

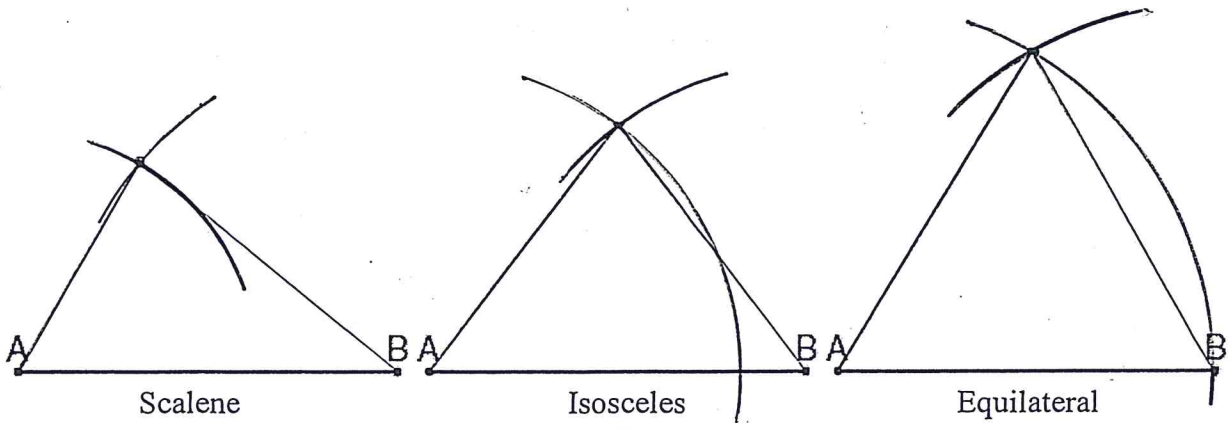
Isosceles

equal arcs not using the length of $\overline{AB}$

Equilateral

equal arcs using the length of $\overline{AB}$

2. Using a compass and straightedge, and $\overline{AB}$ below, construct the following triangles:

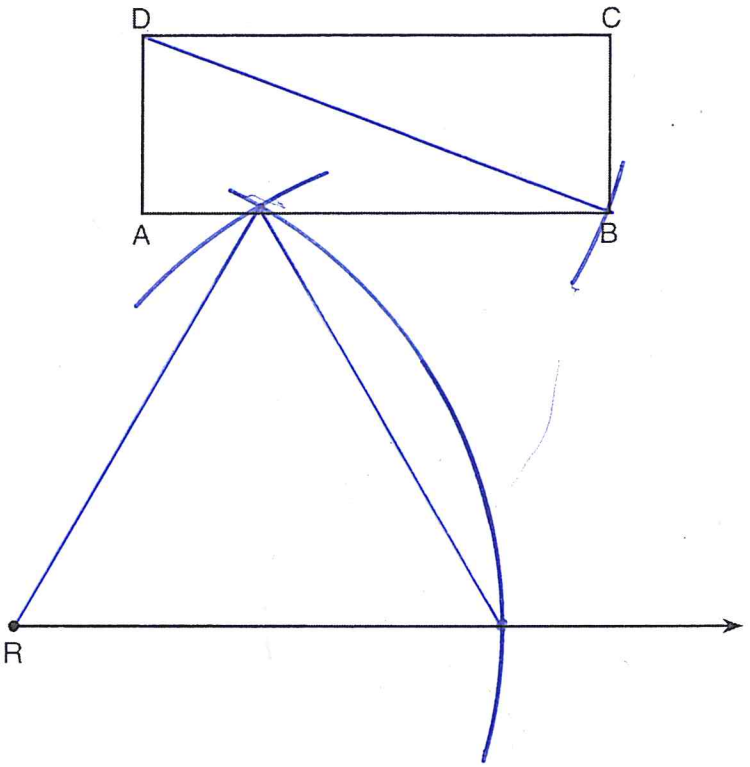


Scalene

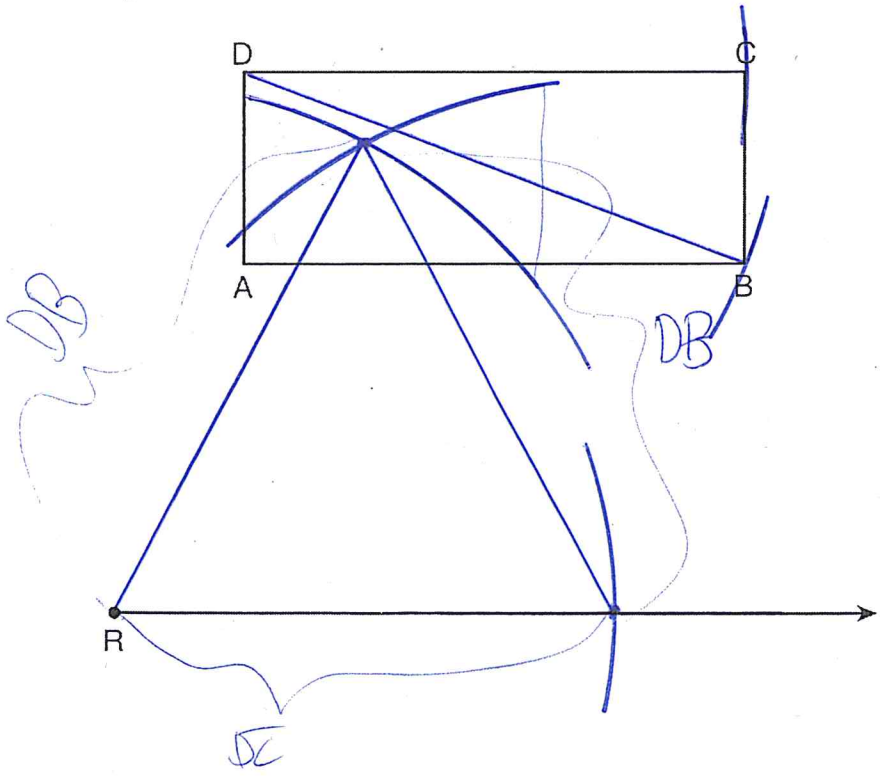
Isosceles

Equilateral

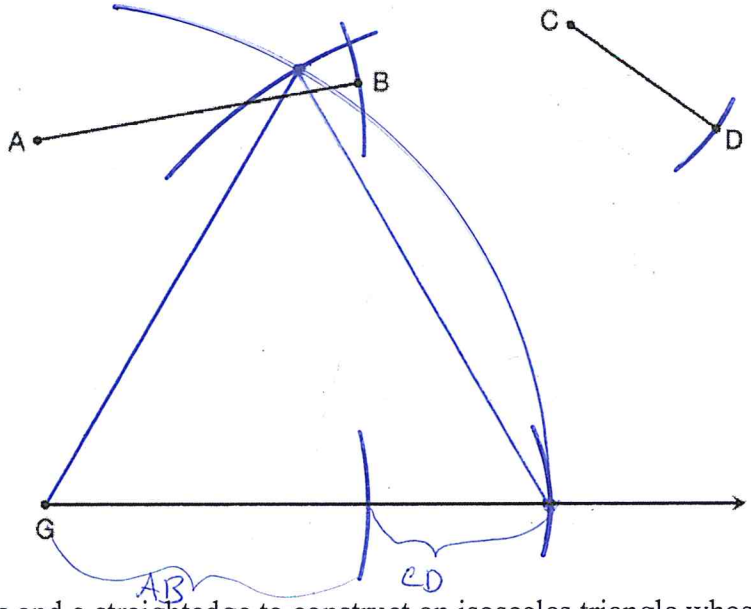
3. On the ray drawn below, using a compass and straightedge, construct an equilateral triangle with a vertex at *R*. The length of a side of the triangle must be equal to a length of the diagonal of rectangle *ABCD*.



4. On the ray drawn below, using a compass and straightedge, construct an isosceles triangle with a vertex at *R*. The length of the congruent sides must be equal to ~~AD~~ $\overline{DB}$ and the length of the third side must be equal to DC.



5. Line segments $\overline{AB}$ and $\overline{CD}$ are shown below. Use a compass and straightedge to construct an equilateral triangle with a vertex at G whose side lengths are equal to the sum of the lengths of segments $\overline{AB}$ and $\overline{CD}$. [Leave all construction marks.]



6. Use a compass and a straightedge to construct an isosceles triangle whose congruent sides are equal to AB and third side is equal to CD.