Neutral Geometry

2d Neutral: SMSG 1-15

2d Euclidean: SMSG 1-16

2d Hyperbolic: SMSG 1-15 +
  hyperbolic parallel postulate

2d Elliptic: elliptic parallel postulate
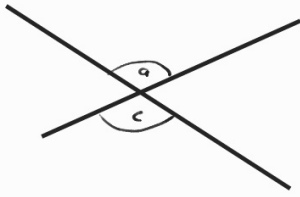 <u>and</u> must alter SMSG 1-15

<u>Area</u>: + SMSG 17-19

  ("areas add")

SMSG 20: $A = bh$

$\Rightarrow d = \sqrt{\Delta x^2 + \Delta y^2}$

SWBQ: Show that opposite angles are equal
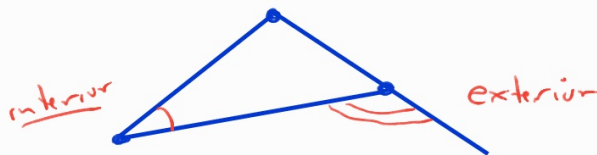   (that is, show $a = c$)

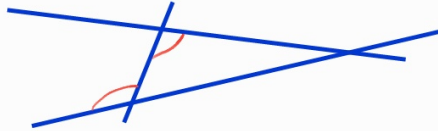which SMSG postulates
    did you use?

Parallel lines exist

Step1: 2 distinct lines intersect in at most 1 point

Step2: The exterior angle of a triangle is bigger than either nonadjacent interior angle

interior   exterior

Step3: If 2 lines are crossed by a 3rd such that a pair of alternate interior angles are equal then the 2 lines are parallel

Step4: Given any line and any point not on the line, $\exists$ at least one line through the point parallel to the given line.