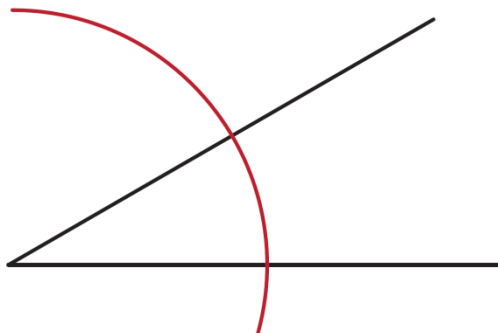**Replicating Angles with a Compass and Ruler**

1. Replicate the following angle using a protractor and a ruler.

    a.

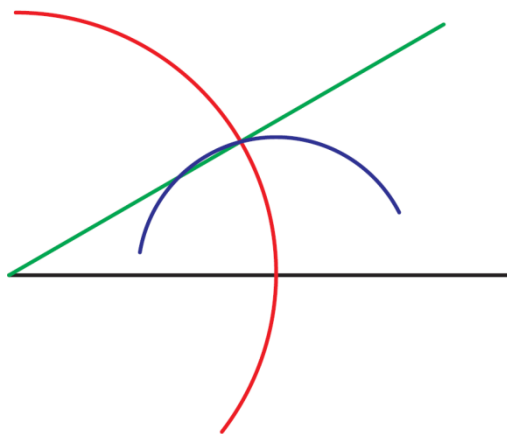*Step 1: Draw a horizontal line with a ruler. Mark the vertex.*

Step 2: Put the point of the compass on the vertex of the original angle, and draw a large arc cutting through both arms of the angle.

Step 3: Without moving the legs of the compass, make an identical arc starting from the vertex mark on the horizontal line you drew.

Step 4: Go back to the original angle, and put the compass point where the arc intersects the horizontal arm of the angle. Open the compass as wide as the position where the pencil touches exactly where the arc intersects the second angle arm.
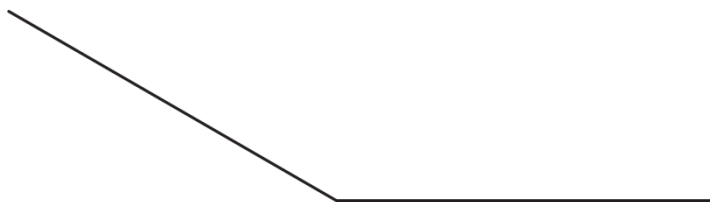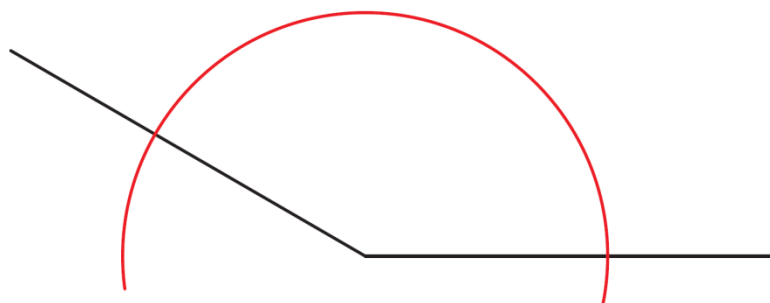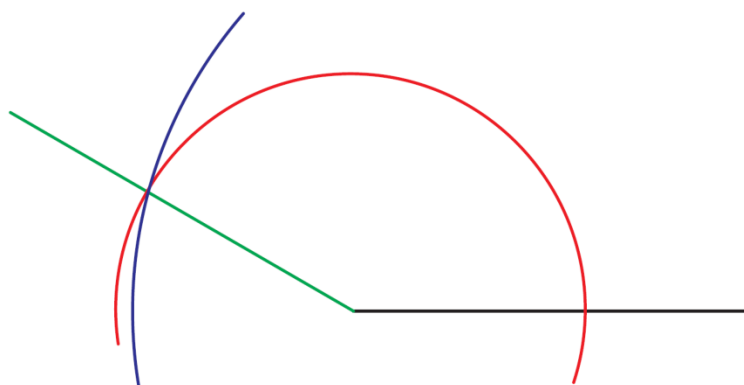
Step 5: On the new angle, keeping the compass legs in the same place, put the compass point on the horizontal line where it intersects the arc. Draw a small arc that intersects the first arc you drew.

Step 6: Connect the vertex mark and the point where the two arcs intersect.

The original angle is now replicated.

b.

Step 1 and 2:

Steps 3 to 6:

The original angle is now replicated.