Geometry **Name:** **Date:**

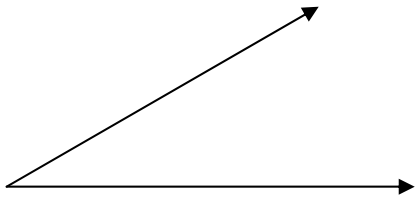
1. Construct a congruent segment using a straight-edge and compass.

_____

Steps:

1. Draw a line
2. Measure original line with compass
3. Draw a point on 2nd line
4. Use compass to draw arc from point on 2nd line
5. Draw a point where arc meets 2nd line.

2. Construct a congruent angle using a straight-edge and compass.



Steps:

1. Draw a line and a point (A_2)
2. Use compass to draw arc over both rays in Original angle
3. Label points A_1, B_1, and C_1
4. Draw arc on 2nd line from endpoint A_2
5. Draw point where arc crosses 2nd line (point $B_{2)}$
6. With Compass, measure from B_1 to C_1
7. Draw arc from B_2 that intersects other arc.
8. Draw a point C_2 where arcs cross
9. Draw a line from A_2 through C_2

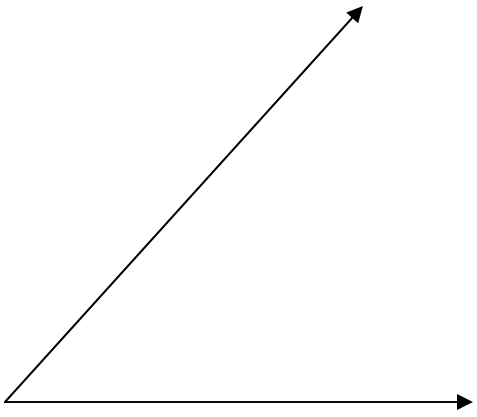
Geometry **Name:** **Date:**

3. Bisect a line segment using a straight-edge and compass.

Steps:

1. Use compass to draw a semicircle (large arc) through the line, from an endpoint.
2. Repeat from opposite endpoint
3. Draw a point where the arcs cross above the line.
4. Draw a point where the arcs cross below the line
5. Draw a line connecting the previous two points.

4. Bisect an angle using a straight-edge and compass.



Steps:

1. Label vertex as A
2. Use the compass to draw an arc from the vertex, through both rays.
3. Draw and label the points where the arcs intersect with the rays. (B and C)
4. Spread the compass to a chosen length. (Use this length twice)
5. Draw arc from point B (away from vertex)
6. Draw arc from point C (away from vertex)
7. Draw a point where the arcs cross and label point D
8. Draw a line from point A through point D