
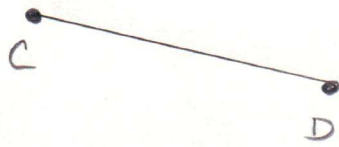
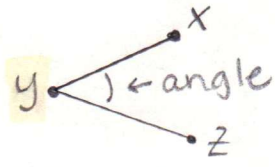
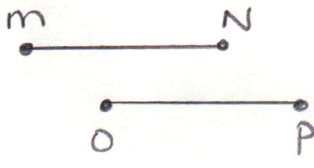
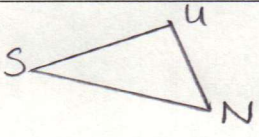

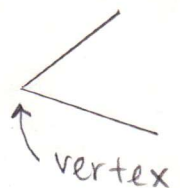
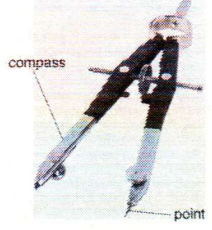


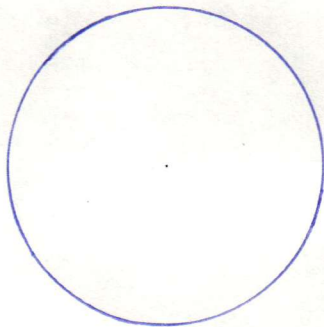
Notes 8.1 – Geometry Constructions & Congruence

Vocabulary

Word	Meaning/Notation	Example
Line	one dimension, created by infinite points that form a straight line that continues forever in both directions	 \overleftrightarrow{AB} or \overleftrightarrow{BA}
Line Segment	a line that has endpoints, does not continue past the endpoints	 \overline{CD} or \overline{DC}
Angle	The space between two intersecting lines or line segments	 $\angle Y$ or $\angle XYZ$ or $\angle ZYX$
Congruent	When two geometric figures are identical same size, same shape \cong symbol for congruent	 $\overline{MN} \cong \overline{OP}$
Triangle	a three sided polygon	 $\triangle SUN$ or $\triangle UNS$ or ...

Word	Meaning/Notation	Example
Arc	a section of a circle	
Vertex	the point where two or more lines meet (corner)	
Compass	a tool that draws circles, arcs, and measures distance	

Practice making arcs with the compass.

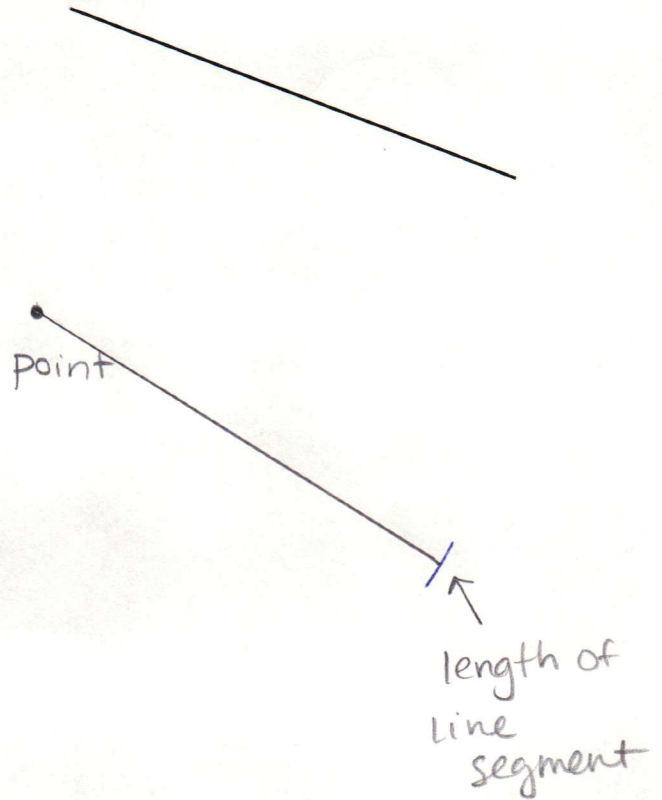


Tools: Compass & Straight edge

Copy a Line Segment

Steps:

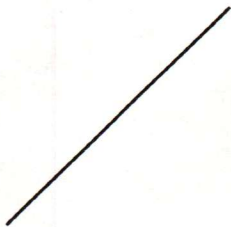
1. make a point
2. use the compass to measure the length of the line segment
3. use the point you made and mark the distance from the point
4. Draw the line with the straight edge



Practice:

Copy each line segment below.

a.



b.



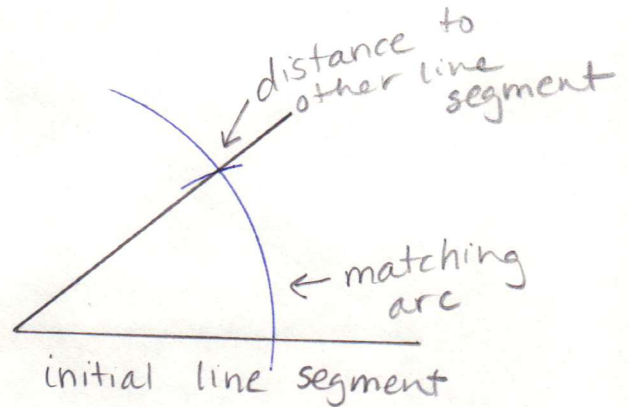
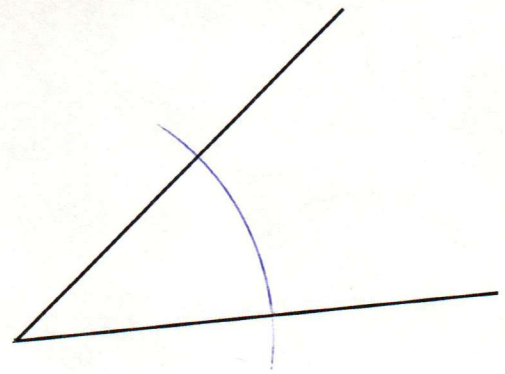
c.



Copy an Angle

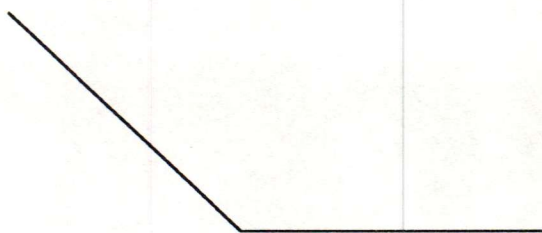
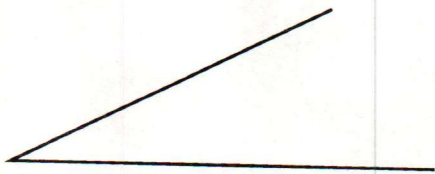
Steps:

1. Make a line segment
2. Make an arc on the given angle
3. Without changing compass, make an arc on the new line segment
4. Measure the distance from line segment to line segment using the arc
5. Mark the distance on the new arc.
6. Connect the endpoint with the marked length

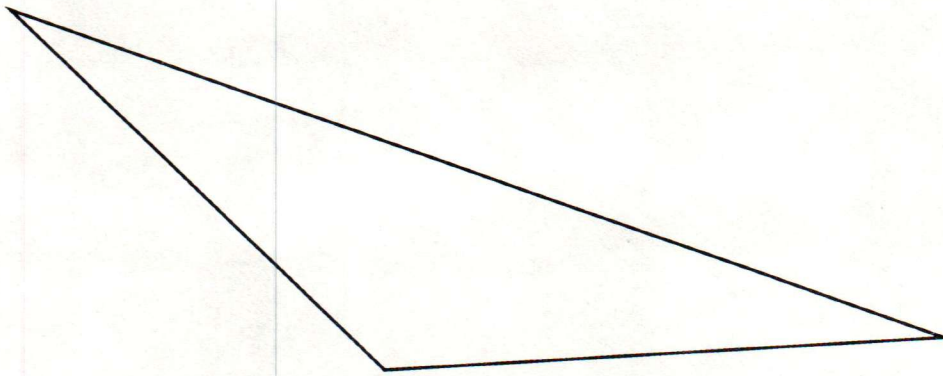


Practice:

Copy each of the given angles.



Use what you have learned about copying line segments and angles to try to copy a triangle.



Describe the steps that you used to copy the triangle.

1. Copy one line segment
2. Copy one angle (connected to line segment)
3. Copy other angle \nearrow
3. Copy other line segment connected to angle
4. Draw line segments through marked angle arcs
4. Connect ends of line segments to make 3rd side