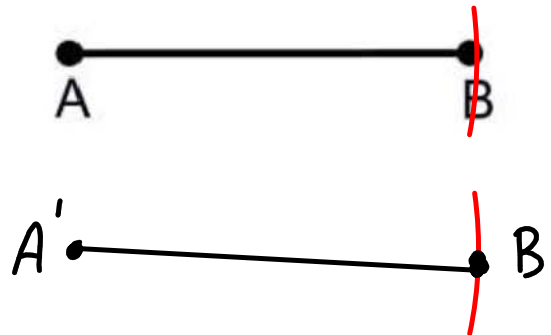


Algebra 1 CC – Mr. Valentino  
Unit 2 Lesson 2: Constructions!

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Period: \_\_\_\_\_

Let's recall what we learned yesterday.

Create a copy of the below line segment. Remember to **label** your copied segment.



Great! Now it is time to try something new. NEW CONSTRUCTION TIME!

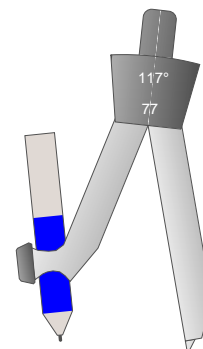
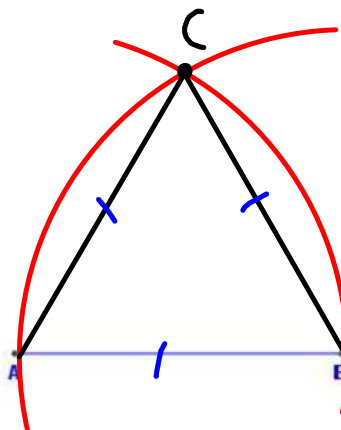
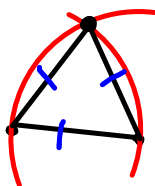


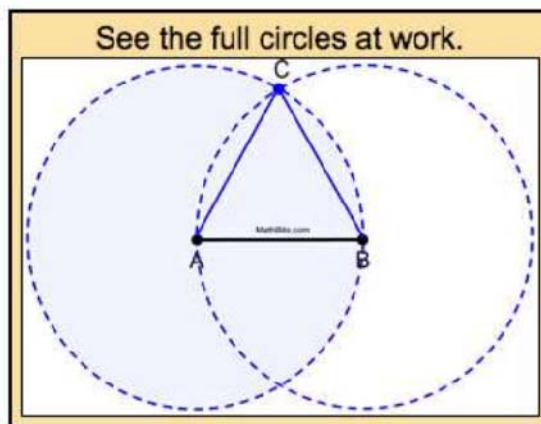
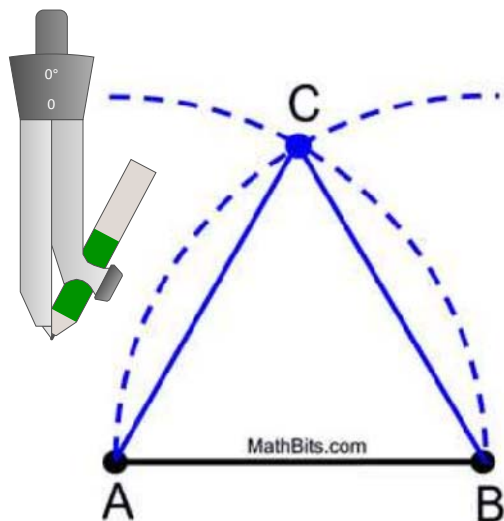
**Given:** the length of one side of the triangle

**Construct:** an equilateral triangle

**STEPS:**

1. Place your compass point on  $A$  and measure the distance to point  $B$ . Swing an arc of this size above (or below) the segment.
2. **Without changing the span on the compass**, place the compass point on  $B$  and swing the same arc, intersecting with the first arc.
3. Label the point of intersection as the third vertex of the equilateral triangle.





One more construction for today...

**Given:**  $\overline{AB}$  (a line segment)  
**Construction:** bisect  $\overline{AB}$ .

Perpendicular  
Bisector

**STEPS:**

1. Place your compass point on  $A$  and stretch the compass MORE THAN half way to point  $B$  (you may also stretch to point  $B$ ).
2. With this length, swing a large arc that will go above and below  $\overline{AB}$ .
3. **Without changing the span on the compass**, place the compass point on  $B$  and swing the arc again. The two arcs need to be extended sufficiently so they will intersect in two locations.
4. Using your straightedge, connect the two points of intersection with a line or segment to locate point  $C$  which bisects the segment.

