**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GSP1.1 Constructing an equilateral triangle**



1. Construct a circle using the “circle” button. Label the center point A and label point B on the circle using the “A” button.
2. Construct another circle starting at point B and ending at point A.
3. Label a point C at the intersection of the two circles (Top or the bottom).
4. Create a segment AB, BC, and AC using the segment button.
5. Hide the two circles using the display menu or Ctrl+H.
6. Select segment AC and measure the length of segment AC using the measure menu.
7. Measure the length of segment AB, and segment BC.
8. Select point A, B, and C in order to measure angle ABC using the measure menu.
9. Measure the angle BCA, and angle CAB.
10. Save your work and submit it to the teacher.

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GSP1.2 Constructing a square**

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1. Construct a segment and label the endpoints A and B.
2. Select segment AB and find the midpoint using the construct menu. Label this midpoint M (double click on the letter to make a change).
3. Select segment AB and point M and construct a line perpendicular to segment AB passing through point M by using the construct menu. Label this line j
4. Construct a circle starting at point M and ending at point A. So, the segment AM is the radius of the circle.
5. Find the intersecting of line j and the circle and construct a point D at this intersection.
6. Select line j and point D and construct a perpendicular line. Label this line k
7. Select like k and point A and construct a perpendicular line. Label this line l
8. Find the intersection of line k and line l and construct a point E.
9. Hide everything except point A, M, E, and D.
10. Construct segment AM, MD, DE, AND EA. This should be the four side4s of the square.
11. Measure the side length of AM, MD, DE, and EA.
12. Measure all four angles of the square.
13. Save and submit your work.

**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GSP1.3 Constructing a**

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1. Construct a circle and label the center point A and point B on the circle.
2. Mark point A the center using the transform menu. (Double click the point A)
3. Select point B and rotate it 45 degree. Using the transform rotate 45 roate.

Continue to rotate the point until there are exactly 8 points on the circle.

All of the points on the circle should be equal distance away.

1. Construct a regular octagon using the points on the circle.
2. Make the diagram small and drag it to a side.

**Expansion: Now construct a circle that has exactly 12 points equal distance away from one another. Then construct dodecagon using the 12 points. Remember a circle has 360 degrees.**

1. Save and submit your work.