

This test is made up of four construction tasks. You **MUST** use **ONLY** a compass and straightedge to complete the construction tasks. **ALL CONSTRUCTION MARKS MUST BE VISIBLE TO RECEIVE CREDIT.**

The test will be graded as follows:

- A: 90 - 100 points
- B: 80 - 89 points
- C: 70 - 79 points
- D: 60 - 69 points

Each task is worth up to the following points:

_____ Task 1: Basic constructions guide - 32 points.

Complete the provided table with an example of how to construct the four basic constructions with step by step directions.

_____ Task 2: Angle construction guide - 32 points.

Complete the provided table showing how to construct a 30° , 45° , 60° , and 90° angles, with step by step directions.

_____ Task 3: proving ASS is bad - 10 points.

Construct two different triangles using the same Angle-Side-and-Side.

_____ Task 4: Construct a perfect square - 10 points.

Step by step directions must be included.

_____ Task 5 -- Find the centroid - 10 points (based on accuracy)

On a piece of cardboard, the student will draw a large triangle. Then using the provided instructions construct the centroid (center of gravity) of the triangle. After showing the work to the teacher, they will cut out their triangle and balance the cardboard to show accuracy.

_____ Task 6 -- Create a Logo - 10 points

You just opened your own business. You want a logo that people will not forget. Your logo must be constructed and contain one capital letter from each group. Use color, make it awesome!

Group 1:	E, F, H, T (must show parallel and/or perpendicular lines)
Group 2:	M, N, W, Z (must copy an angle)

_____ Task 7 - Design a garden -10 points

You have been asked to design a garden for Bill Gates' house (a diagram of the property will be provided). This garden must contain five flower beds, each a different shape. One must be rectangular, one must be a parallelogram (that is not a rhombus), and one must be a rhombus. Be creative!

Each person must do their own work, but it can be done in class or at home.

Task #1: 32 points (4 points per box) --- BASIC CONSTRUCTIONS GUIDE

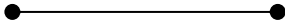
Construction

Step-by-step directions.

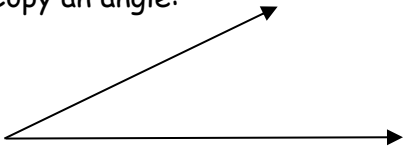
1. Copy a segment:



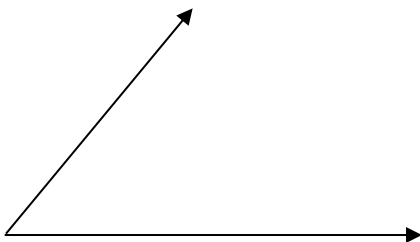
2. Construct a perpendicular bisector:



3. Copy an angle:



4. Bisect an angle:



Task #2 - 32 points. (4 points per box) -- ANGLE CONSTRUCTIONS GUIDE

Angle measure	Step-by-step directions
1. 30°	
2. 45°	
3. 60°	
4. 90°	

Task # 3 - 10 points - Proving ASS is bad

Copy the given angle and segments in order creating two different triangles with the same Angle-Side-Side.



Task #4 - 10 points -- CONSTRUCT A PERFECT SQUARE

Task # 5 - 10 points -- Constructing the centroid of a triangle instructions

The centroid of a triangle is its center of gravity. Your task is to find the centroid of a triangle you draw on a piece of cardboard about the size of a piece of paper.

Step 1: THIS STEP SHOULD TAKE ABOUT 30 SECONDS. With a straight edge, draw (do not construct) a **SCALENE** triangle in the middle of the cardboard. It should cover about half of the cardboard with room for construction marks on both sides of each side of the triangle. It cannot be an equilateral triangle.

Step 2: Construct the three medians. A median is a segment between a vertex and the midpoint of the opposite side.

Step 3: The three medians should all meet at one point. This point is the centroid. When you have found the centroid bring your cardboard to your teacher. After I have seen it, you can cut out your triangle and attempt to balance the triangle on the eraser of a pencil.

Task #6 - 10 points - CREATE A LOGO (feel free to do it on another full sheet of paper)