

First Project MTH 211 Spring 2010

Ayman Badawi

1 Group: Elham Radmehr, Shaima Rizvi, Parastoo Najafi

- (i) Instruments are allowed to use : a line segment of length 2, a line segment of length 1, unmarked ruler, and a compass. Construct a line segment of length $\frac{\sqrt{17}}{\sqrt{5}}$. State the steps and verify your construction.

2 Group: Rama Husamddine, Eman Saadieh, and Maha Moustafa

- (i) Assume that α is the measurement of the angle abc . Use unmarked ruler and a compass only to bisect the angle α . State the steps and verify your construction.
- (ii) Use unmarked ruler and a compass to construct an angle of measurement 120 degrees. State the steps of construction.

3 Group: Najeeb, Shaza, Abeer, Nosheen Khan

- (i) Draw a line segment of length 7. Now use UNMARKED RULER, a Compass (you may use them as many times as you want), and a MARKED ruler ONLY ONCE to construct a line segment of length $\sqrt{12}$.

4 Group: Rasha Dakkak, Nadia Azzam, Rola El Nounou

- (i) Draw a horizontal line and call it L_1 , draw another line and call it L_2 such that L_2 intersects L_1 at an angle $\alpha < 90$. Let C be a point that does not lie on either L_1 nor L_2 . Find two points a on L_2 , b on L_1 such that C lies on the line segment ab and $|ac| = 3|cb|$. You are allowed to use ONLY UNMARKED RULER and a COMPASS. State the steps and VERIFY your construction.

5 Group: Amel A. Al Aboodi, Laila A. Kifayeh, Mohamed K. Al Qallaf

- (i) Let ab be a line segment of length of length say $d > 1$. Use a line segment of length one (only once), UNMARKED RULER, and a COMPASS to construct a line segment of length \sqrt{d} . State the steps and verify your construction.

6 Group: Ali sagban, Fatma almulla, Tulip Hazbar

- (i) Draw a line segment of length $d \geq 12$. Use a line segment of length one (only twice), UNMARKED RULER, and a COMPASS to construct a line segment of length $\sqrt[3]{d}$. State the steps and verify your construction.

7 Group: Varsha Vineeth, Ban, Aisha

- (i) You have two line segments. One is of length 11, and the other of length 7. Use a line segment of length one only once, UNMARKED RULER, and a COMPASS to construct a line segment of length $11/7$. State the steps and verify your construction.

8 Group: May Abrash, Fatema Zohara Moidu, Samima Saqib

- (i) Draw a horizontal line and call it L_1 , draw another line and call it L_2 such that L_2 is perpendicular to L_1 . Let a be a point on L_2 that is not on L_1 . Draw a line segments am of length one cm such that am is parallel to L_1 . Find two points c on L_2 , d on L_1 such that m lies on the line segment cd and $|dm| = 7|mc|$. You are allowed to use ONLY UNMARKED RULER and a COMPASS. State the steps and VERIFY your construction.

9 Group: Fatima Al Za'abi, Fatima Ahmed, and Sana.

- (i) Let ab be a line segment of length $d \geq 6$. Construct a square with ab as one of the diagonals.

10 Group: Roxanne A.Djaiji , Samir Saleh , Raad Moh'd Hajjar

- (i) Let ab be a diameter of a semicircle. Find two points say D, F lying on the arc of the semicircle and two points say X, Y lying on the diameter ab such that $DFYX$ is a square. State the steps of construction and verify it.

Faculty information

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