Geometry for the Arts and Architecture MTH 211 spring 2010, 1–2

# Third Project MTH 211 Spring 2010

Ayman Badawi

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

(i) You have a board that is a regular 6-gon such that each side is 5 cm length. We want to tile the board using pieces of regular 6-gon such that each side is 2 cm and pieces of regular 3-gon such that each side is 2 cm. Do the tiling. (USE YOUR OWN TASTE of coloring so it would like nice.)

#### 2 Group: Nadia Azzam, Rola El Nounou

(i) First Draw or make a triangle abc such that the angle at b is 90, color it with blue, the angle at c is 45, color it with red, and the angle at a is 45, color it with green. Make the length of bc = 2 cm. Use pieces of this type of triangles to tile a  $30 \times 30$  board so that all around a should be in green, all around b should be in blue, and all around c should be in red.

# 3 Group: Fatima Al Za'abi, Fatima Ahmed, and Sana

(i) ( book, number 3, page 88): Start with an equilateral triangle abc such that each side is 2 cm and find the midpoint of each side. Draw a curve (any curve) from the midpoint of ab to the vertex a, then rotate a copy of it around the midpoint of ab. Repeat the same procedure for the the side bc and the side ac (you may use different curves) on bc and ac). USE pieces of this object to tile a 30 × 30 board as much as you can. Use your own taste of coloring.

#### 4 Group: May Abrash, Fatema Zohara Moidu, Samima Saqib

(i) Start with a square abcd such that each side is 3 cm and find the midpoint of each side. Draw a curve (any curve) from the midpoint of ab to the vertex a, then rotate a copy of it around the midpoint of ab. Repeat the same procedure for the the sides bc cd, and ad (you may use different curves) on bc cd, and ad). USE pieces of this object to tile a 12 × 12 board. Use your own taste of coloring.

#### 5 Group: Varsha Vineeth, Ban, Aisha

(i) we want to use regular 12-gons and equilateral triangles to tile a  $30 \times 30$  board such that the length of each side of these two objects is 2 cm. USE your own taste of coloring.

#### 6 Group:Rama Husamddine, Eman Saadieh, and Maha Moustafa

(i) First Draw or make a triangle abc such that the angle at b is 90, color it with blue, the angle at c is 30, color it with red, and the angle at a is 60, color it with green. Make the length of bc = 1 cm. Use pieces of this type of triangles to tile a 12 × 12 board so that all around a should be in green, all around b should be in blue, and all around c should be in red. TILE the board as much as you can!!!

# 7 Group: Amel A. Al Aboodi, Laila A. Kifayeh

(i) Start with a  $4 \times 2$  rectangle abcd. Find the midpoint of each side. Draw a curve (any curve) from the midpoint of ab to the vertex a, then rotate a copy of it around the midpoint of ab. Repeat the same procedure for the the sides bc cd, and ad (you may use different curves) on bc cd, and ad). USE pieces of this object to tile a  $12 \times 12$  board. Use your own taste of coloring.

#### 8 Group: Najeeb, Shaza, Abeer, Nosheen Khan

(i) Start with a regular 6-gon. abcdef such that each side is 4 cm and find the midpoint of each side. Draw a curve (any curve) from the midpoint of ab to the vertex a, then rotate a copy of it around the midpoint of ab. Repeat the same procedure for the remaining sides (you may use different curves) on the remaining sides. USE pieces of this object to tile a  $40 \times 40$  board. Use your own taste of coloring.

### 9 Group: Elham Radmehr, Shaima Rizvi, Parastoo Najafi

(i) Start with one regular 6-gon, two squares, and one equilateral triangle such that the length of each side of these three objects is 2 cm. Use pieces of these three objects to tile a  $30 \times 30$  board. USE your own taste of coloring.

#### 10 Group: Ali sagban, Fatma almulla, Tulip Hazbar

(i) We want to use regular 5-gons and golden acute triangles to tile a 30 × 30 board as much as we can. The base of each golden acute triangle is 2cm and the length of each side of each regular 5-gon is also 2cm. USE your own taste of coloring.

#### **Faculty information**

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