MATLAB

Tutorial 4

Exercise 1

- **Exercise 1**
- Use a while loop to print out the square of integers from 1 up to some maxValue.

Exercise 2

- **Exercise 2**

- Sam invested 10 000 GBR
- Sam gets paid compounded interest at a rate 0.3% per month.
- The rate after the 8th year changes to 5.75% per annum.

- Calculate his resulting saving each year and after 10 years.

Exercise 3

- **Exercise 3**
- create a graph that draws a straight line from the point (0,0) to
- every other point of the set (1,0), (1,1), (1,2), (1,3), (1,4).

Exercise 4

- **Exercise 4**
- **Draw 4 (think N !) different colours Klein bottles in 1 page (figure)**

- **http://uk.mathworks.com/matlabcentral/fileexchange/5880-klein-bottle?focused=6141816&tab=function**

Exercise 5

- **Exercise 5**
  - u=linspace(0,6*pi,60);
  - v=linspace(0,2*pi,60);
  - [u,v]=meshgrid(u,v);
  - x=2*(1-exp(u/(6*pi))).*cos(u).*cos(v/2).^2;
  - y=2*(-1+exp(u/(6*pi))).*sin(u).*cos(v/2).^2;
  - z=1-exp(u/(3*pi))-sin(v)+exp(u/(6*pi)).*sin(v);
  - mesh(x,y,z)
  - view(160,10)
  - axis equal
  - box on
  - surf(x,y,z)
  - hidden off
  - surf(x,y,z,'FaceColor','interp',...
  - 'EdgeColor','none',...
  - 'FaceLighting','phong')
  - camlight left
  - view(160,10)
  - axis equal
  - axis off