Extra Credit 3

Due: Friday, February 15, 2019 **Points:** 40

1. (*40 points*) This program asks you to plot four functions over specified intervals. To plot these, begin at the starting point of the interval, and advance 0.01 until you reach the end.

   The four functions are in the file "funcs.py" available in the assignment area. The intervals they are to be plotted over are:

function	*intervals on x axis*
`f1`	[-7, -3); (-1, 1); (3, 7]
`f2`	[-7, -4); (4, 7]
`f3`	[-4, 4]
`f4`	[-3, -1); (1, 3]

   You do not need to draw the axes. Also, set the speed of the turtle (pen) to 10; otherwise, drawing the picture will take a long time.

   What picture does this draw?

   Please call your program "plotting.py".

   Hint: If you don't scale the x and y co-ordinates of the plot, the figure will probably be too small to see it well. I used a scale factor of 25—that is, when I plotted or moved to point (x, y), I multiplied both x and y by 25 before plotting or moving to it. Also, you will need to import the square root function for the functions to work:

   ```
   from math import sqrt
   ```

   or

   ```
   from math import sqrt
   ```