Homework 8

Part C

a) Potential

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Question 1

```
Clear["Global*"]

mandelbrot[cx_, cy_, lim_]:=
Module[{z = 0, ct = 0}, While[Abs[z] < 2.0&&ct ≤ lim, z = z^2 + cx + Icy;
++ct];
−ct];

mandelbrotC = Compile[{cx, cy, lim},
Module[{z = 0. + I0., ct = 0},
While[Abs[z] < 2.0&&ct ≤ lim, z = z^2 + cx + Icy;
++ct];
−ct]];

DensityPlot[mandelbrot[x, y, 100], {x, −2, 0.6}, {y, −1.3, 1.3},
PlotPoints → 200, Mesh → False, ColorFunction → (Hue[0.65#1^0.6]&),
FrameLabel → {"cx", "cy"}]
```