Quadratic Curve Derivation (Hermite Approach)

* You need four points to draw the curve
  + Start – End (x,y)
  + Slope of Start – Slope of End (u,v)
* Combine the four equations
* Note that (x,y)1 is the start point and (x,y)2 is end point
* We need to transform (u,v) to (x,y)

We will set the four points as key points when , , , and respectively.

* (x,y)1 is start point
* (x,y)2 is second point
* (x,y)3 is Third point
* (x,y)4 is end point

So final formula

int x = x1 + x2 \* t + (-3 \* x1 - 2 \* x2 + 3 \* x4 - x3) \* t \* t + (2 \* x1 + x2 - 2 \* x4 + x3) \* t \* t \* t;

int y = y1 + y2 \* t + (-3 \* y1 - 2 \* y2 + 3 \* y4 - y3) \* t \* t + (2 \* y1 + y2 - 2 \* y4 + y3) \* t \* t \* t;

Clipping Algorithm

* Before calling SetPixel check whether the point is inside the circle or outside by substituting in