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CPSC 453: Introduction to computer graphics

Homework 3

Part I:

1. $(\overline{b} * \overline{b})(x) = \int_{\Re} \overline{b}(x) * \overline{b}(x-y)dy = \int_{0}^{1} \overline{b}(x-y)dy = \int_{x-1}^{x} \overline{b}(t)dt$

   $(\overline{b} * \overline{b})(x) =$
2. If we have the barycentric coordinates for a triangle, the point P will be $P = A + u(C-A) + v(B-A)$, u and v have to be less than 1 and $u+v<1$, if these conditions are satisfied then the point P is within the triangle
3. The surface is a sphere, the normal at point (x,y,z) is the normalized Gradient. This surface can be modelled in OpenGL by generating points by varying u and v between 0 and 2Pi, and then drawing these points.