**Week 11 Tutorial Questions**

7.6 Suppose that we have two translucent surfaces characterized by opacities α1 and α 2. What is the opacity of the translucent material that we create by using the two in series? Give an expression for the transparency of the combined material.

**Alpha1 + inverse(alpha1)\*alpha2 so it’s the amount of light that gets through the first object + the amount that does not get through multiplied by the second object.**

7.14 Consider a scene composed of simple objects, such as parallelepipeds, that are instanced at different sizes. Suppose that you have a single texture map and you are asked to map this texture to all the objects. How would you map the texture so that the pattern would be the same size on each face of each object?

**Two ways to go about this. The first being to sample of the screen position and the second is to scale the sample.**

7.29 When we super sample a scene using jitter, why should we use a random jitter pattern?

**Stops patterns occurring in your sampling.**

7.30 In what types of applications might you prefer a front-to-back rendering instead of a back-to-front rendering?

**Helpful when using ray tracing as the second you hit an object you can stop as it is the most forward object.**