

1. Describe recursive ray tracing. What is its purpose? How does it work and follow the path of light? What components does it divide the light into, what types of rays are used, when must new rays be generated, and where does recursion appear? (etc.)
2. Describe the incoherent component of the simplified illumination equation used in ray tracing. Explain the related terms of the equation, their meaning, and their parameters.
3. Write down the simplified illumination equation used in ray tracing. What terms correspond to the emitted, ambient, direct-illumination, reflected, and refracted light components?
4. What is aliasing? How does it occur in ray tracing?
5. What methods are used to accelerate intersection tests (e.g., bounding volumes, space partitioning methods)? Describe them briefly. How are they used to speed up intersection search?
6. How can a convex polyhedron be represented? (Hint: intersection of half-spaces)
7. How can the intersection of a parametric ray and a convex polyhedron be computed?