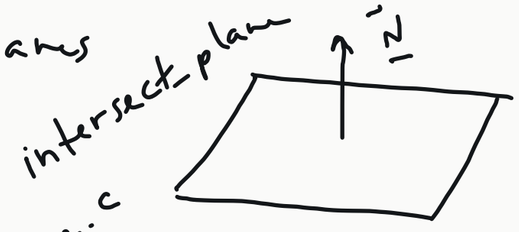
plane.c

plane

intersect_plane



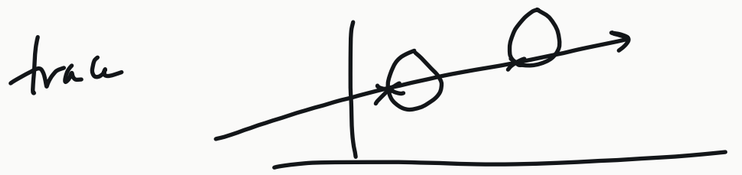
dp = normal · ray.dir

if dp == 0
  no int
else
  t = -(dot(normal, ray.or) + D) / dp

if t < 0
  no int
else
  int_pt
  normal

---

trace



rt.h

OBJ_T
  union {
    SPHERE_T sphere
    PLANE_T plane
  }
  Char type
  color
  int checker
  color2
  int (*intersect) (RAY_T ray,
    struct OBJ *obj, double *t,
    VP_T *int_pt, VP_T *normal)

checkerboard

illuminate

obj_color = (checker && .color
if ((int) floor (int_pt.x) +
  (int) floor (int_pt.y)
  .z)) & 1))
  obj_color = color2