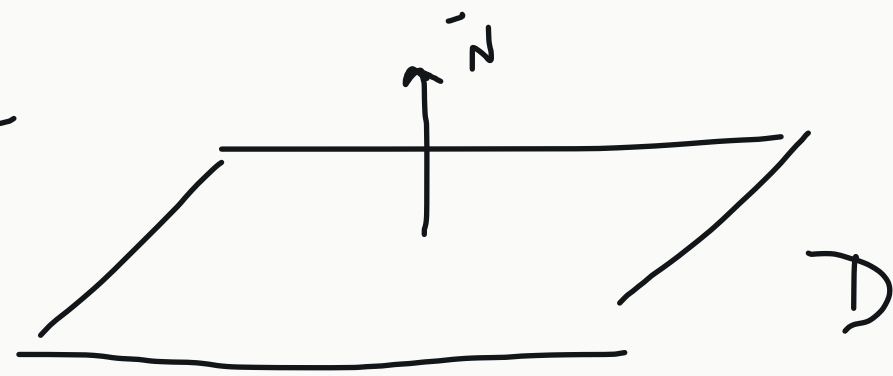


plane



intersect_plane

plane.c

$dp = \text{normal} \cdot \text{ray.dir}$

if $dp == 0$
no int

else

$*t = -(\text{dot}(\text{normal}, \text{ray.or}) + D) / dp$

if $t < 0$
no int

int_pt
normal

trace

rt.h

OBJ_T

```
typedef struct OBJ {
    union {
        SPHERE_T sphere
        PLANE_T plane
    }

```

char type

color

checker

color2

int (*intersect) (RAY_T ray,
struct OBJ *obj, *t, *int_pt, *normal)

} OBJ_T

checkerboard
illuminate

$\text{obj_color} = \text{obj} \rightarrow \text{color}$

if ($\text{obj} \rightarrow \text{checker} \ \&\&$

$((\text{int}) \text{floor}(\text{int_pt.x}) +$
 $(\text{int}) \text{floor}(\text{int_pt.y}) +$
 $\dots z) \& 1))$

$\text{obj_color} = \text{obj} \rightarrow \text{color2}$