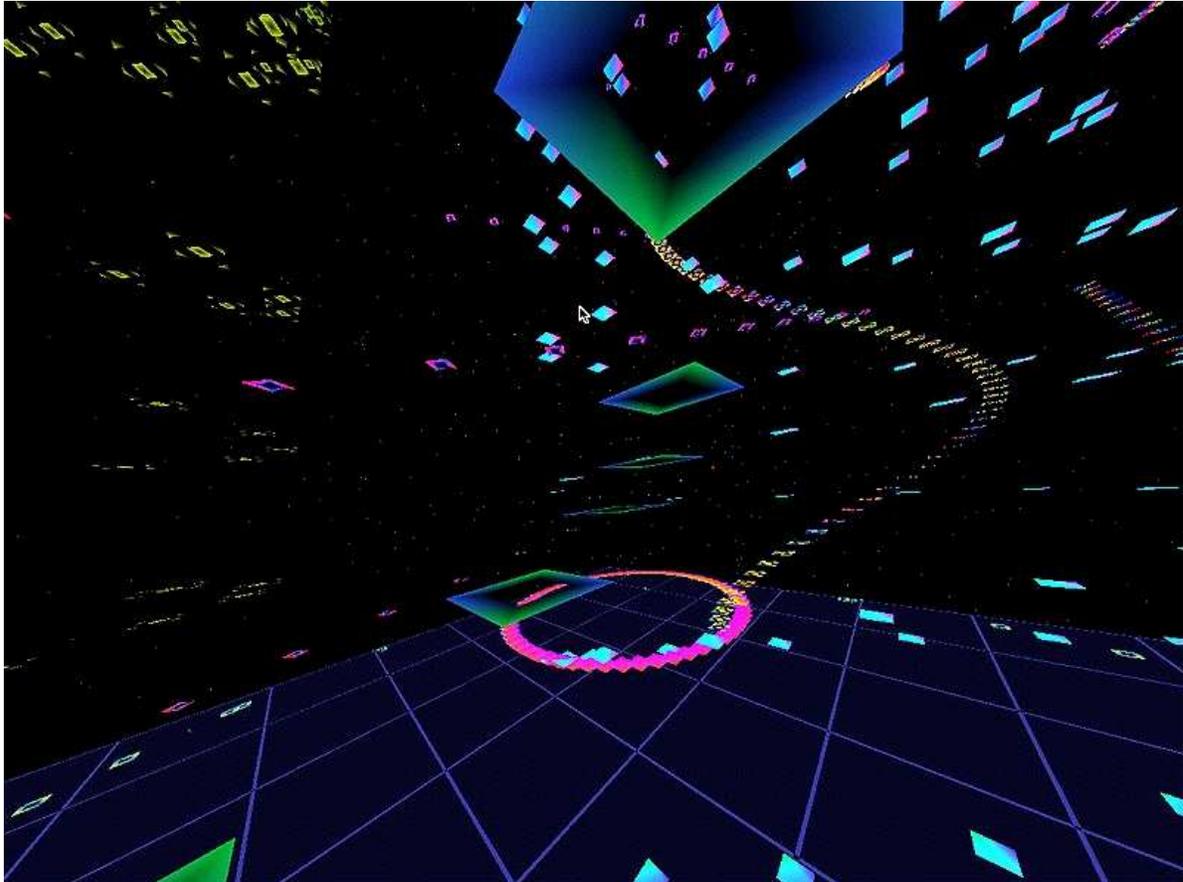The game "tranquility" is a relaxation game. It can give a nice break, for example after play-ing a more violent game. The game is a simple three dimensional world, where you bounce off planes to catch the spinner and move up a level.

(The game can be downloaded for free at www.tqworld.com).

Problem. Assume one of the plane has the form

$$z = 10$$

and that you move on the line

$$\vec{x}(t) = (20, 20, 20) + t(4, 3, 2)$$

a) When and where do you hit the plane?

b) Assume you bounce off at the plane. What is the line you move on after the bounce?