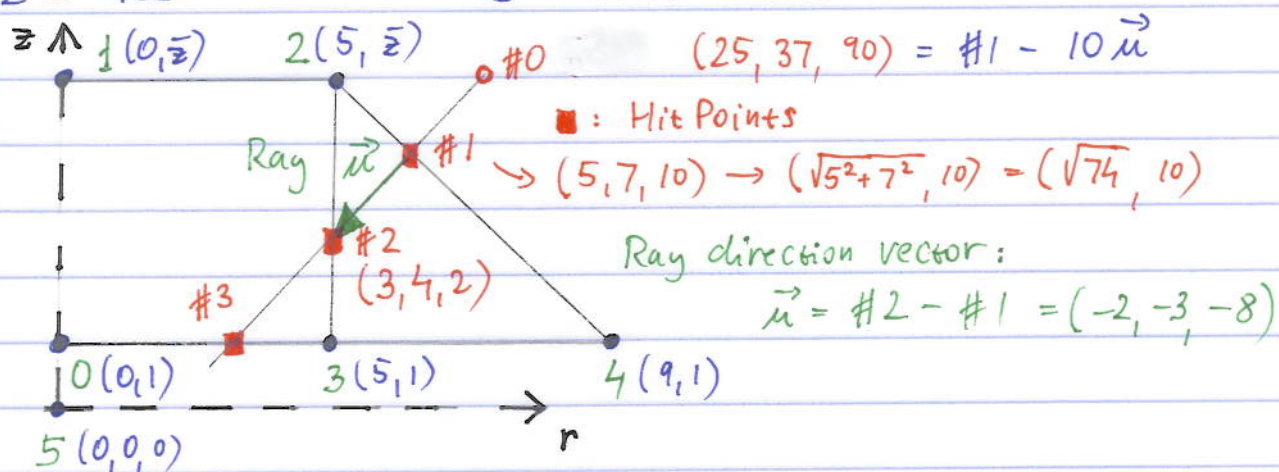


mesh_cones.cpp, test_Mesh.cpp

Test Ray handovers between neighboring Zones and Faces

2-D RZ

$$\bar{z} = 91.52624423050491$$



↳ Bounding Sphere of radius 100 centered at Node 5(0,0,0) is not shown in this drawing. → Zone 0

Grid point 2: line $\vec{v} = (\sqrt{74} - 9, 10 - 1)$; $r \stackrel{!}{=} 5 = 9 + (\sqrt{74} - 9)t \Rightarrow t = \frac{4}{9 - \sqrt{74}}$
 $\bar{z} = 1 + 9t = 91.526 \dots$

Hit Point #3: $z \stackrel{!}{=} 1 = 2 - 8t \Rightarrow t = \frac{1}{8} = 0.125$

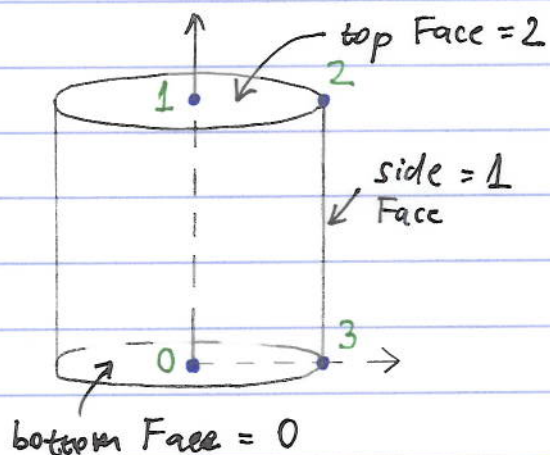
$$x = 3 - 2t = 2.75 ; y = 4 - 3t = 3.625$$

Hit Point #4: from $|\#3 + \vec{u}t| = 100 \Rightarrow t \approx 11.7046 \dots$

$$x \approx -20.6592 \dots ; y \approx -31.4889 \dots ; z \approx -92.6371 \dots$$

on the bounding Sphere: $x^2 + y^2 + z^2 = 100^2$

3-D Zone 1 (cylinder)



Zone 2 (cone)

