**The Hell Problem**

Suppose you are burning in hell right now. You are slowly turning into a delicious crispy.

Imagine you are swimming in a lava ocean with a coordinate of (1/3,1/5,1/2) with a temperature given according to your location f(x,y,z) = 3x2 -5y2 +2z2  [109 C0] .

You want to escape this place by going to the nearest cool place. So, you want to find the nearest direction to this cool place.

If Satan advises you to go to a direction of i +2j + k from your current location. Is Satan saying the truth and trying to help you escape?

* By THS

Answer :

To escape to the nearest cool place, we want to find the direction of the steepest slope corresponding to the lowest temperature possible which is given by :

Duf = - w f at (1/3,1/5,1/2)

Duf = -6x i -10y j + 4z k at (1/3,1/5,1/2)

Duf = -2i +2j -2k = 2( -i +j -k )

{ 2 is neglected because it is a multiplier }

= ***-i + j - k and not (i,2j,1k)***

Then Satan is a deceiver. Moral of the story never trust Satan