Using the starting point of closest pair of points in a 2-d plane, the condition to change was just how far to check in the strip and check the z and y. In 2-d, it was geometrically proven that only the next 7 could be possible. In 3-d, this is much harder as there are infinite amount of layers to checks in the third axis. To address, I had two strips, one ordered by Z and one by Y. I would then look for the min in each strip, which would stop when their respective axis coordinates goes beyond the strip bound. These two mins would then be compared to see which is smaller. After which, it would compare it to the min from the right and left side. The run-time of this algorithm is $\Theta(n * log(n))$.