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Problem 20

The two lines in a 3 dimensional space are defined by the following parameterized vector functions:

Line 1: $\vec{r}_1(t) = \langle t + 1, 2t + 4, -3t + 5 \rangle$

Line 2: $\vec{r}_2(t) = \langle 4t - 12, -t + 8, t + 17 \rangle$

where $t \in \mathfrak{R}$.

What is the equation of the smallest sphere which is tangent to both lines?

Submission Instructions

Submit to : [MAJ Jong H. Chung](#)

How : As an attachment to an email (please make sure your name is in the attachment!)

With the subject line : WP POTW

Failure to follow these directions may result in your submission not making into the pile in the right order!