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[ STUDENT > restart;
[ STUDENT >
[ STUDENT > # In addition to symbols previously defined in the thread:
[ STUDENT > # Let M = L2 - L1

[ STUDENT > eq1:=R^2 = (Cx -(L1x + Mx*t))^2 +R^2 + (Cy -(L1y +
My*t))^2 +(Cz -(L1z + My*t))^2 ;

eq1 := R^2 = (Cx - L1x - Mx t)^2 + R^2 + (Cy - L1y - My t)^2 + (Cz - L1z - My t)^2
[ STUDENT > soln:=solve(eq1,t);

soln := 1/2 (-2 L1x Mx - 2 L1y My + 2 Cx Mx + 2 Cy My + 2 Cz My - 2 L1z My + 2 (2 Mx^2 Cy L1y
+ 4 My^2 Cx L1x + 2 Mx^2 Cz L1z + 2 L1y My^2 Cy - 2 L1y My^2 Cz + 2 L1y My^2 L1z + 2 Cy My^2 Cz
- 2 Cy My^2 L1z + 2 Cz My^2 L1z - 2 L1x Mx Cy My - 2 L1x Mx Cz My + 2 L1x Mx L1z My
- 2 L1y My Cx Mx + 2 Cx Mx Cy My + 2 Cx Mx Cz My - 2 Cx Mx L1z My + 2 L1x Mx L1y My
- L1y^2 My^2 - Cy^2 My^2 - Cz^2 My^2 - L1z^2 My^2 - Mx^2 L1z^2 - Mx^2 Cz^2 - Mx^2 L1y^2 - Mx^2 Cy^2
- 2 My^2 Cx^2 - 2 My^2 L1x^2)^{1/2}) / (Mx^2 + 2 My^2), 1/2 (-2 L1x Mx - 2 L1y My + 2 Cx Mx
+ 2 Cy My + 2 Cz My - 2 L1z My - 2 (2 Mx^2 Cy L1y + 4 My^2 Cx L1x + 2 Mx^2 Cz L1z
+ 2 L1y My^2 Cy - 2 L1y My^2 Cz + 2 L1y My^2 L1z + 2 Cy My^2 Cz - 2 Cy My^2 L1z + 2 Cz My^2 L1z
- 2 L1x Mx Cy My - 2 L1x Mx Cz My + 2 L1x Mx L1z My - 2 L1y My Cx Mx + 2 Cx Mx Cy My
+ 2 Cx Mx Cz My - 2 Cx Mx L1z My + 2 L1x Mx L1y My - L1y^2 My^2 - Cy^2 My^2 - Cz^2 My^2
- L1z^2 My^2 - Mx^2 L1z^2 - Mx^2 Cz^2 - Mx^2 L1y^2 - Mx^2 Cy^2 - 2 My^2 Cx^2 - 2 My^2 L1x^2)^{1/2}) / (
Mx^2 + 2 My^2)

[ STUDENT > simplify(soln[1]);

(-L1x Mx - L1y My + Cx Mx + Cy My + Cz My - L1z My + (2 Mx^2 Cy L1y + 4 My^2 Cx L1x
+ 2 Mx^2 Cz L1z + 2 L1y My^2 Cy - 2 L1y My^2 Cz + 2 L1y My^2 L1z + 2 Cy My^2 Cz - 2 Cy My^2 L1z
+ 2 Cz My^2 L1z - 2 L1x Mx Cy My - 2 L1x Mx Cz My + 2 L1x Mx L1z My - 2 L1y My Cx Mx
+ 2 Cx Mx Cy My + 2 Cx Mx Cz My - 2 Cx Mx L1z My + 2 L1x Mx L1y My - L1y^2 My^2 - Cy^2 My^2
- Cz^2 My^2 - L1z^2 My^2 - Mx^2 L1z^2 - Mx^2 Cz^2 - Mx^2 L1y^2 - Mx^2 Cy^2 - 2 My^2 Cx^2 - 2 My^2 L1x^2)^{1/2}
) / (Mx^2 + 2 My^2)

[ STUDENT > simplify(soln[2]);

(-L1x Mx - L1y My + Cx Mx + Cy My + Cz My - L1z My - (2 Mx^2 Cy L1y + 4 My^2 Cx L1x
+ 2 Mx^2 Cz L1z + 2 L1y My^2 Cy - 2 L1y My^2 Cz + 2 L1y My^2 L1z + 2 Cy My^2 Cz - 2 Cy My^2 L1z
+ 2 Cz My^2 L1z - 2 L1x Mx Cy My - 2 L1x Mx Cz My + 2 L1x Mx L1z My - 2 L1y My Cx Mx
+ 2 Cx Mx Cy My + 2 Cx Mx Cz My - 2 Cx Mx L1z My + 2 L1x Mx L1y My - L1y^2 My^2 - Cy^2 My^2
- Cz^2 My^2 - L1z^2 My^2 - Mx^2 L1z^2 - Mx^2 Cz^2 - Mx^2 L1y^2 - Mx^2 Cy^2 - 2 My^2 Cx^2 - 2 My^2 L1x^2)^{1/2}
) / (Mx^2 + 2 My^2)

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$$\left[\begin{array}{l} -Cz^2 My^2 - Llz^2 My^2 - Mx^2 Llz^2 - Mx^2 Cz^2 - Mx^2 Lly^2 - Mx^2 Cy^2 - 2 My^2 Cx^2 - 2 My^2 Llx^2 \end{array} \right]^{1/2} \\) / (Mx^2 + 2 My^2)$$

[**STUDENT** >