

r: $(x^2+y^2+z^2)^{(1/2)}$; /* aca defino r */

$$\sqrt{z^2 + y^2 + x^2}$$

I: $(A \cdot x^2 + B \cdot y^2 + C \cdot z^2) / r^2$; /* aca defino I */

$$\frac{C z^2 + B y^2 + A x^2}{z^2 + y^2 + x^2}$$

V: $-G/r \cdot (M + (A+B+C-3 \cdot I) / 2 / r^2)$; /* aca defino V */

$$G \left[\frac{-\frac{3|C z^2 + B y^2 + A x^2|}{z^2 + y^2 + x^2} + C + B + A}{2|z^2 + y^2 + x^2|} + M \right]$$

$$-\frac{\sqrt{z^2 + y^2 + x^2}}$$

derx: $\text{diff}(V, x, 1)$; /* aca derivo respecto a x 1 vez */

$$G x \left[\frac{-\frac{3|C z^2 + B y^2 + A x^2|}{z^2 + y^2 + x^2} + C + B + A}{2|z^2 + y^2 + x^2|} + M \right]$$

$$\frac{\left| z^2 + y^2 + x^2 \right|^{3/2}}$$

$$G \frac{\left| \frac{6x \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} - \frac{6Ax}{z^2 + y^2 + x^2} \right|}{\left| \frac{3 \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} + C + B + A \right|} - \frac{\left| \frac{3 \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} + C + B + A \right|}{\left| \frac{2 \sqrt{z^2 + y^2 + x^2}}{\sqrt{z^2 + y^2 + x^2}} \right|^2}$$

$$\sqrt{\frac{z^2 + y^2 + x^2}{z^2 + y^2 + x^2}}$$

dery: diff(V,y,1); /* aca derivo respecto a y 1 vez */

$$G y \frac{\left| -\frac{3 \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} + C + B + A \right|}{\left| \frac{2 \sqrt{z^2 + y^2 + x^2}}{\sqrt{z^2 + y^2 + x^2}} \right|^2} + M$$

$$\frac{\left| \frac{2 \sqrt{z^2 + y^2 + x^2}}{\sqrt{z^2 + y^2 + x^2}} \right|^{3/2}}{\sqrt{\frac{z^2 + y^2 + x^2}{z^2 + y^2 + x^2}}}$$

$$G \frac{\left| \frac{6y \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} - \frac{6By}{z^2 + y^2 + x^2} \right|}{\left| \frac{3 \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} + C + B + A \right|} - \frac{\left| \frac{3 \sqrt{Cz^2 + By^2 + Ax^2}}{\sqrt{z^2 + y^2 + x^2}} + C + B + A \right|}{\left| \frac{2 \sqrt{z^2 + y^2 + x^2}}{\sqrt{z^2 + y^2 + x^2}} \right|^2}$$

$$\sqrt{\frac{z^2 + y^2 + x^2}{z^2 + y^2 + x^2}}$$