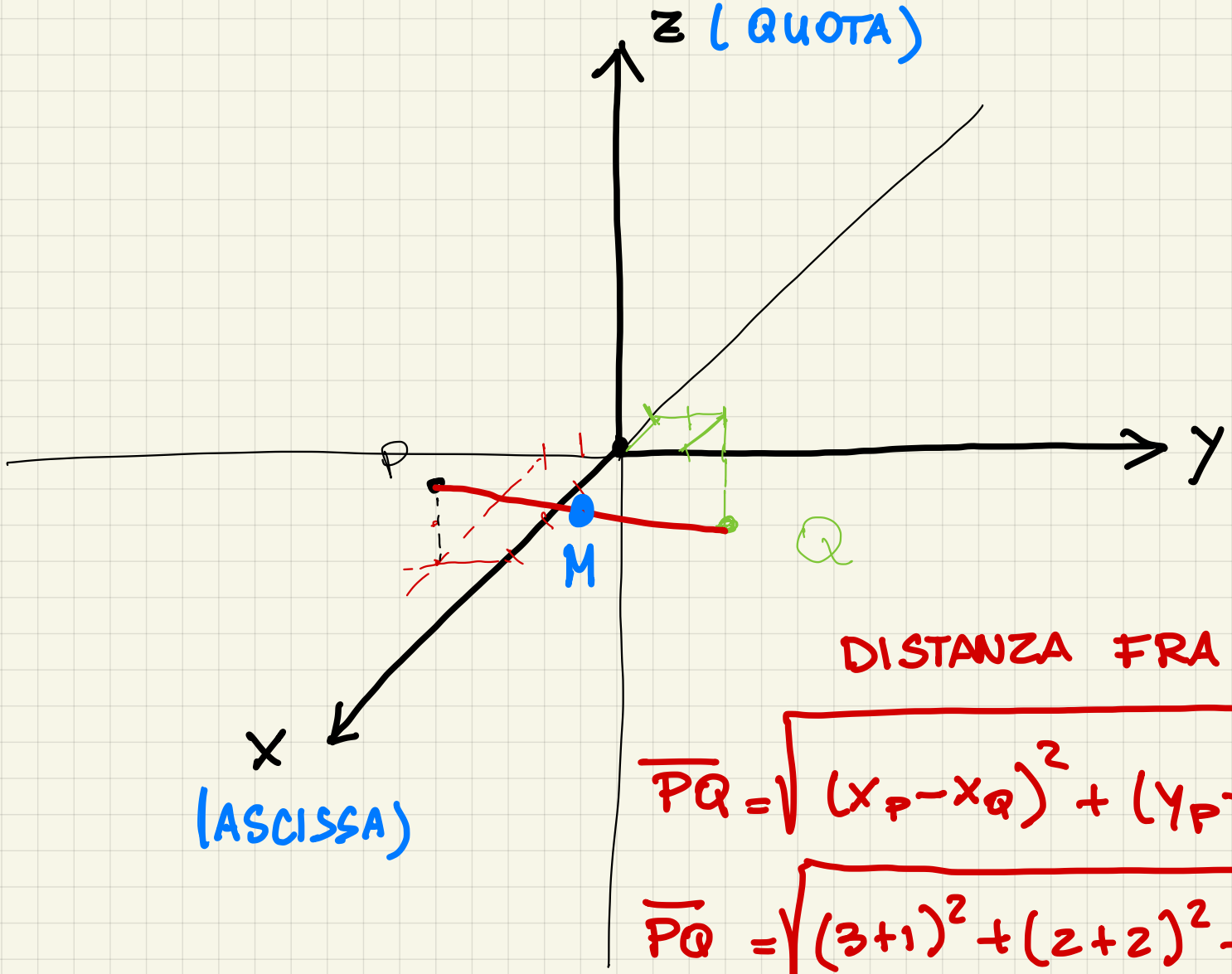
GEOMETRIA ANALITICA NELLO SPAZIO.

M4029

DISEGNARE IL GRAFICO CARTESIANO IN 3D



$P(x_P; y_P; z_P)$

$P(3; -2; 2)$

$Q(-1; 2; -3)$

DISTANZA FRA DUE PUNTI

$$\overline{PQ} = \sqrt{(x_P - x_Q)^2 + (y_P - y_Q)^2 + (z_P - z_Q)^2}$$

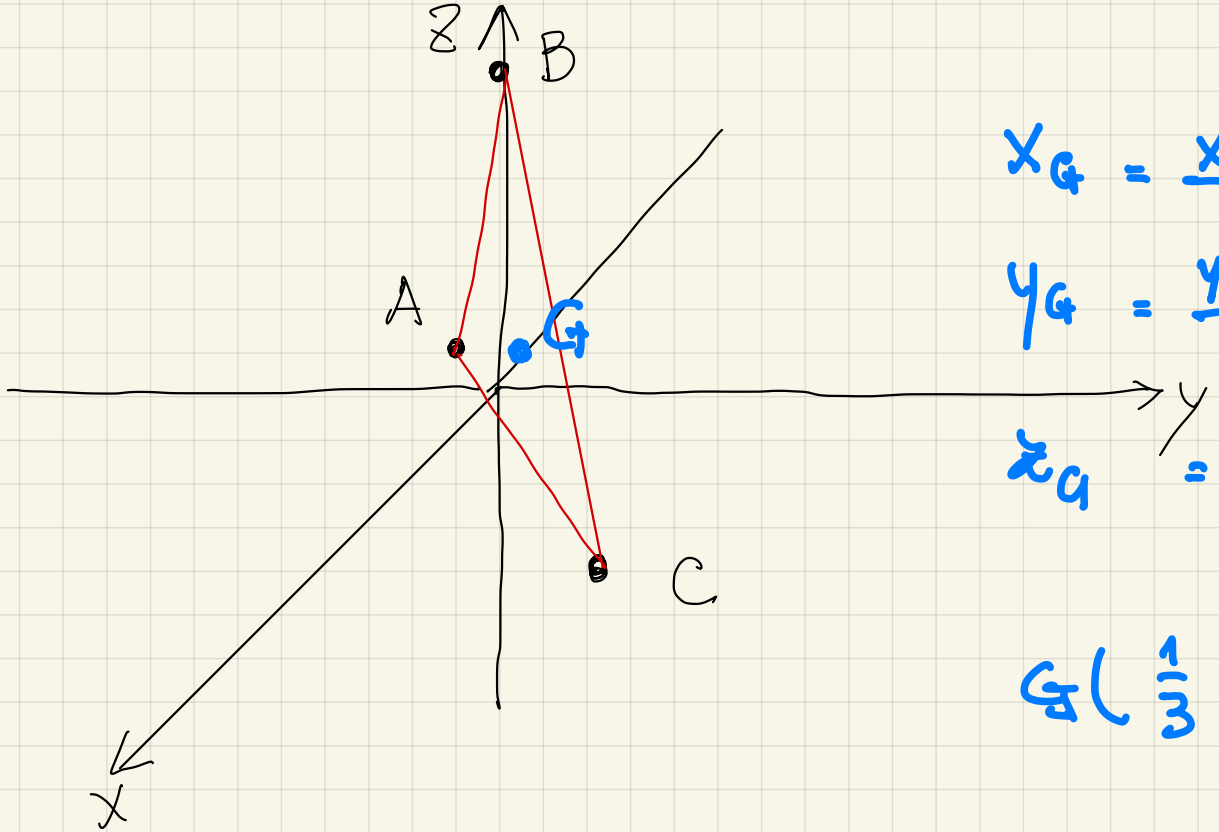
$$\overline{PQ} = \sqrt{(3+1)^2 + (2+2)^2 + (-3-2)^2} =$$

$$= \sqrt{16 + 16 + 25} = \sqrt{57}$$

$$x_M = \frac{x_P + x_Q}{2} \qquad y_M = \frac{y_P + y_Q}{2} \qquad z_M = \frac{z_P + z_Q}{2}$$

$$x_M = \frac{3-1}{2} = +1 \qquad y_M = \frac{-2+2}{2} = 0 \qquad z_M = \frac{-3+2}{2} = -\frac{1}{2}$$

$A(2;1;3)$ $B(-1;-1;9)$ $C(0;2;-4)$



BARICENTRO

$$x_G = \frac{x_A + x_B + x_C}{3} = \frac{1}{3}$$

$$y_G = \frac{y_A + y_B + y_C}{3} = \frac{2}{3}$$

$$z_G = \frac{z_A + z_B + z_C}{3} = \frac{5}{3}$$

$$G\left(\frac{1}{3};\frac{2}{3};\frac{5}{3}\right)$$