

4) b) Point M:

$$\vec{GM} = \frac{1}{4} \vec{GF}$$

$$x_M - x_G = \frac{1}{4} (x_F - x_G) \text{ soit } x_M - 1 = \frac{1}{4} (1 - 1) \text{ et donc}$$

$$\boxed{x_M = 1}$$

$$y_M - y_G = \frac{1}{4} (y_F - y_G) \text{ soit } y_M - 1 = \frac{1}{4} (0 - 1) \text{ et donc}$$

$$\boxed{y_M = 1 - \frac{1}{4} = \frac{3}{4}}$$

$$z_M - z_G = \frac{1}{4} (z_F - z_G) \text{ soit } z_M - 1 = \frac{1}{4} (1 - 1) \text{ et donc}$$

$$\boxed{z_M = 1}$$

$$\boxed{\text{Donc } M(1; \frac{3}{4}; 1)}$$

Point N:

$$\vec{EN} = \frac{3}{4} \vec{EH}$$

$$x_N - x_E = \frac{3}{4} (x_H - x_E) \text{ soit } x_N - 0 = \frac{3}{4} (0 - 0) \text{ et donc}$$

$$\boxed{x_N = 0}$$

$$y_N - y_E = \frac{3}{4} (y_H - y_E) \text{ soit } y_N - 0 = \frac{3}{4} (1 - 0) \text{ et donc}$$

$$\boxed{y_N = \frac{3}{4}}$$

$$z_N - z_E = \frac{3}{4} (z_H - z_E) \text{ soit } z_N - 1 = \frac{3}{4} (1 - 1) \text{ et donc}$$

$$\boxed{z_N = 1}$$

$$\boxed{\text{Donc } N(0; \frac{3}{4}; 1)}$$

