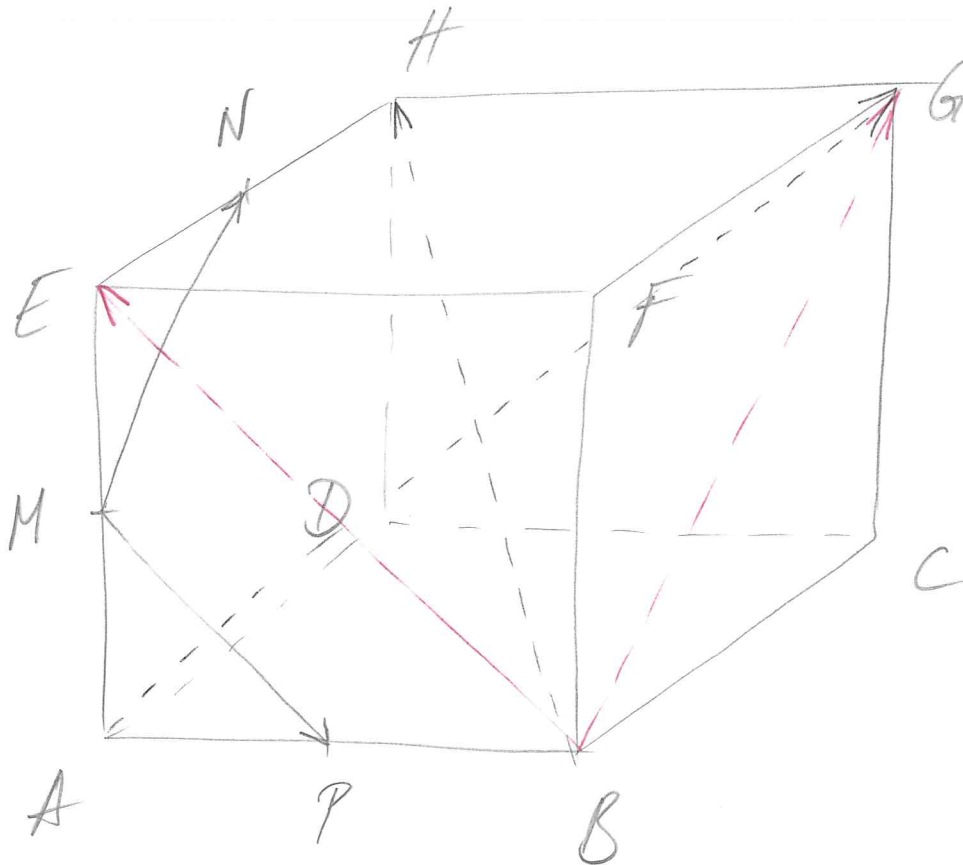


1.4.29

MS geodet



On exprime les vecteurs dans la base

$$\mathcal{B} = \{ \vec{AB}; \vec{AD}; \vec{AE} \}$$

$$2) \vec{BE} = (-1; 0; 1) \quad \vec{BG} = (0; 1; 1)$$

Calcul de l'angle:

$$\frac{\vec{BE} \cdot \vec{BG}}{\|\vec{BE}\| \cdot \|\vec{BG}\|} = \frac{1}{\sqrt{2} \cdot \sqrt{2}} = \frac{1}{2}; \quad \cos^{-1}\left(\frac{1}{2}\right) = 60^\circ$$

1.4.29<sub>2</sub>

MMS geodect

$$b) \vec{AG} = (1; 1; 1) \quad \vec{BH} = (-1; 1; 1)$$

$$\frac{\vec{AG} \cdot \vec{BH}}{\|\vec{AG}\| \cdot \|\vec{BH}\|} = \frac{-1 + 1 + 1}{\sqrt{3} \cdot \sqrt{3}} = \frac{1}{3}$$

$$\cos^{-1}\left(\frac{1}{3}\right) \approx 70,53^\circ$$

$$c) \vec{MN} = (0; \frac{1}{2}; \frac{1}{2}) \quad \vec{MP} = (\frac{1}{2}; 0; -\frac{1}{2})$$

$$\frac{\vec{MN} \cdot \vec{MP}}{\|\vec{MN}\| \cdot \|\vec{MP}\|} = \frac{0 + 0 - \frac{1}{4}}{\sqrt{\frac{1}{2}} \sqrt{\frac{1}{2}}} = \frac{-\frac{1}{4}}{\frac{1}{2}}$$

$$= -\frac{1}{4} \cdot 2 = -\frac{1}{2}$$

$$\cos^{-1}\left(-\frac{1}{2}\right) = 120^\circ$$