

Appendix bij artikel Turning Torso

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Met vergrotingen van de figuren 9 , 10 en 11.

Steunvector van zwaartepunt van pentagon

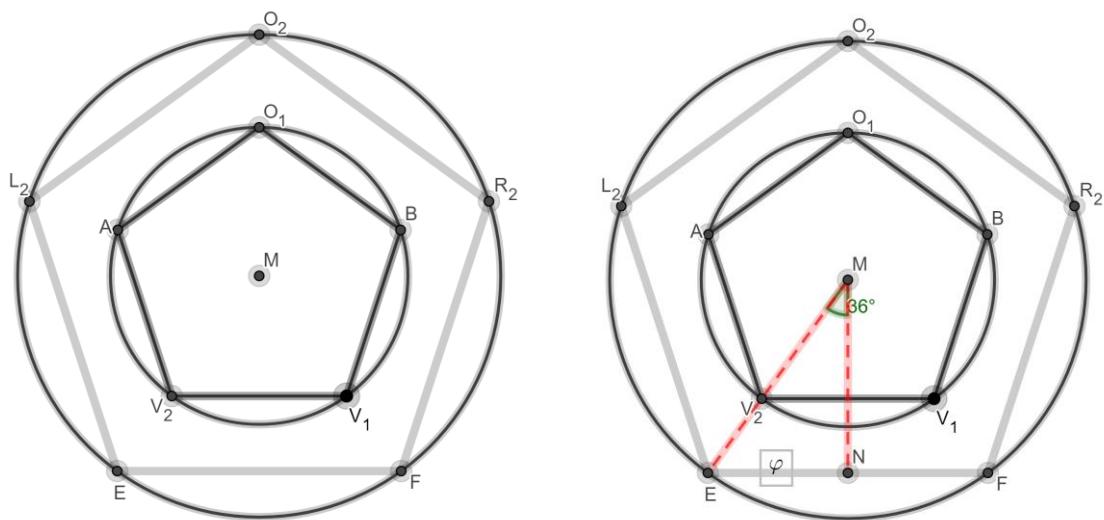
$$V_1V_2FB_1E = \frac{1}{5} \left(\begin{pmatrix} \varphi+1 \\ -1 \\ 0 \end{pmatrix} + \begin{pmatrix} \varphi+1 \\ 1 \\ 0 \end{pmatrix} + \begin{pmatrix} \varphi \\ \varphi \\ \varphi \end{pmatrix} + \begin{pmatrix} 1 \\ 0 \\ \varphi+1 \end{pmatrix} + \begin{pmatrix} \varphi \\ -\varphi \\ \varphi \end{pmatrix} \right) = \frac{1}{5} \begin{pmatrix} 4\varphi+3 \\ 0 \\ 3\varphi+1 \end{pmatrix}$$

Kwadraat van de lengte van de steunvector

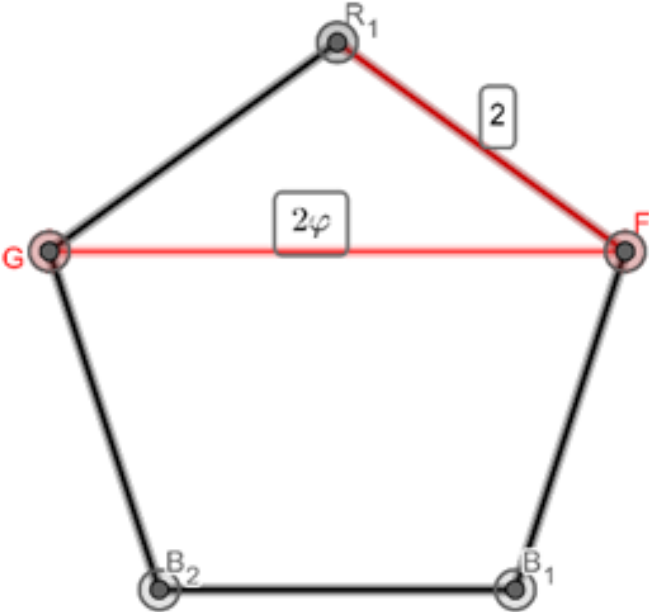
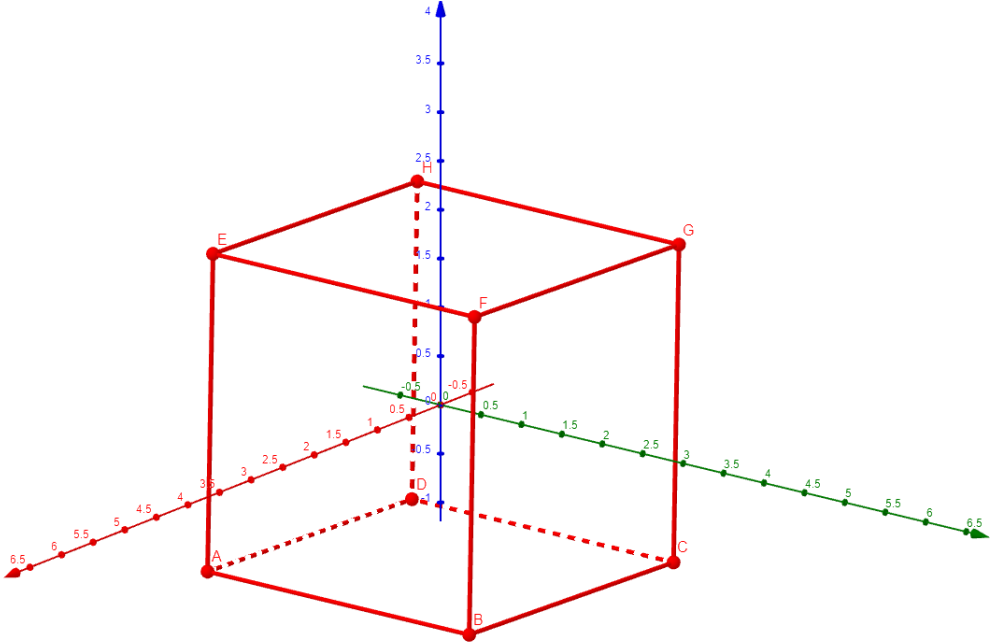
$$\frac{1}{25} (9 + 24\varphi + 16\varphi^2 + 9\varphi^2 + 6\varphi + 1) = \frac{1}{25} (25\varphi + 25 + 30\varphi + 10) = \frac{22\varphi + 14}{10}$$

$$\text{lengte} = \sqrt{\frac{22\varphi + 14}{10}} = \langle \varphi = 0,5 + 0,5\sqrt{5} \rangle = \sqrt{\frac{11\sqrt{5} + 25}{10}}$$

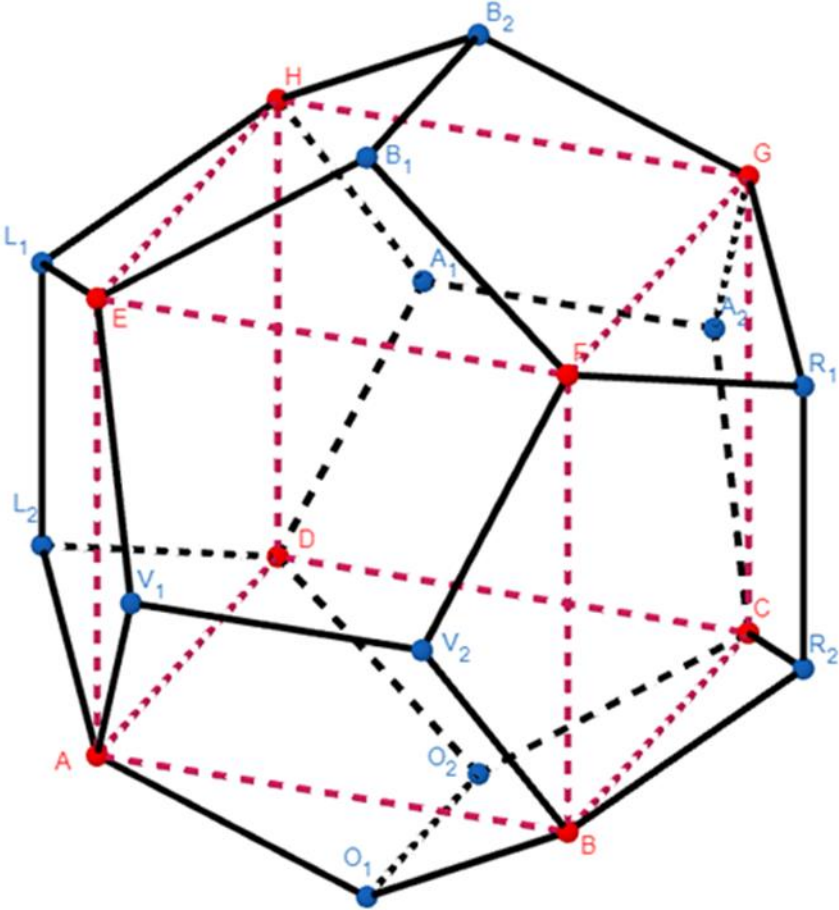
Cilinderspiralen



Figur 9



Figuur 10



Figuur 11

