

	Navn:		Skole:	
	Klasse: 20		Dato: 28. august 2021	Fag: Matematik A

Opgave 474

$$\vec{p} = \begin{pmatrix} -2 \\ 1 \\ 3 \end{pmatrix}$$

$$\vec{q} = \begin{pmatrix} 5 \\ -3 \\ 2 \end{pmatrix}$$

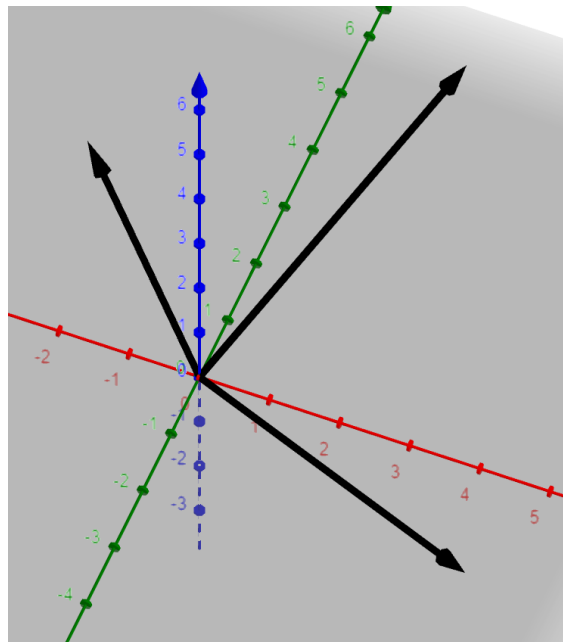
$$\vec{r} = \begin{pmatrix} 3 \\ 2 \\ 6 \end{pmatrix}$$

$$\vec{a} = \vec{p} + \vec{q} + \vec{r}$$

$$\vec{a} = \begin{pmatrix} -2 \\ 1 \\ 3 \end{pmatrix} + \begin{pmatrix} 5 \\ -3 \\ 2 \end{pmatrix} + \begin{pmatrix} 3 \\ 2 \\ 6 \end{pmatrix}$$

$$\vec{a} = \begin{pmatrix} -2 + 5 + 3 \\ 1 - 3 + 2 \\ 3 + 2 + 6 \end{pmatrix}$$

$$\vec{a} = \begin{pmatrix} 6 \\ 0 \\ 11 \end{pmatrix}$$



$$|\vec{a}| = \sqrt{6^2 + 0^2 + 11^2}$$

$$|\vec{a}| = \sqrt{36 + 0 + 121}$$

$$|\vec{a}| = \sqrt{157}$$

$$|\vec{a}| = 12.53$$

$$\vec{b} = \vec{p} - \vec{q} - \vec{r}$$

$$\vec{b} = \begin{pmatrix} -2 \\ 1 \\ 3 \end{pmatrix} - \begin{pmatrix} 5 \\ -3 \\ 2 \end{pmatrix} - \begin{pmatrix} 3 \\ 2 \\ 6 \end{pmatrix}$$

$$\vec{b} = \begin{pmatrix} -2 - 5 - 3 \\ 1 + 3 - 2 \\ 3 - 2 - 6 \end{pmatrix}$$

$$\vec{b} = \begin{pmatrix} -10 \\ 2 \\ -5 \end{pmatrix}$$

$$|\vec{b}| = \sqrt{-10^2 + 2^2 + -5^2}$$

$$|\vec{b}| = \sqrt{100 + 4 + 25}$$

$$|\vec{b}| = \sqrt{129}$$

$$|\vec{b}| = 11.36$$