	Navn:		Skole:	
	Klasse: 20		Dato: 7. september 2021	Fag: Matematik A

Opgave 444

$$\vec{r} = \begin{pmatrix} 2 \\ -3 \end{pmatrix}$$
$$\vec{s} = \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$

$$\vec{a} = \vec{r} + \vec{s}$$
$$\vec{a} = \begin{pmatrix} 2 \\ -3 \end{pmatrix} + \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$
$$\vec{a} = \begin{pmatrix} 2+4 \\ (-3)+1 \end{pmatrix}$$
$$\vec{a} = \begin{pmatrix} 6 \\ -2 \end{pmatrix}$$

$$|\vec{a}| = \sqrt{x^2 + y^2}$$
$$|\vec{a}| = \sqrt{6^2 + (-2)^2}$$
$$|\vec{a}| = \sqrt{40}$$
$$|\vec{a}| = 6.32$$

$$\overrightarrow{e_a} = \vec{a} \div |\vec{a}|$$
$$\overrightarrow{e_a} = \begin{pmatrix} 6 \div 6.32 \\ (-2) \div 6.32 \end{pmatrix}$$
$$\overrightarrow{e_a} = \begin{pmatrix} 0.95 \\ -0.32 \end{pmatrix}$$

$$\vec{b} = \vec{r} - \vec{s}$$
$$\vec{b} = \begin{pmatrix} 2 \\ -3 \end{pmatrix} - \begin{pmatrix} 4 \\ 1 \end{pmatrix}$$
$$\vec{b} = \begin{pmatrix} 2-4 \\ (-3)-1 \end{pmatrix}$$
$$\vec{b} = \begin{pmatrix} -2 \\ -4 \end{pmatrix}$$

$$|\vec{b}| = \sqrt{x^2 + y^2}$$
$$|\vec{b}| = \sqrt{(-2)^2 + (-4)^2}$$
$$|\vec{b}| = \sqrt{20}$$
$$|\vec{b}| = 4.47$$

$$\overrightarrow{e_b} = \vec{b} \div |\vec{b}|$$
$$\overrightarrow{e_b} = \begin{pmatrix} (-2) \div 4.47 \\ (-4) \div 4.47 \end{pmatrix}$$
$$\overrightarrow{e_b} = \begin{pmatrix} -0.45 \\ -0.89 \end{pmatrix}$$