Opgave 442

$$A = (4; 1)$$
$$B = (-2; 5)$$

$$\overrightarrow{AB} = \begin{pmatrix} B_x - A_x \\ B_y - A_y \end{pmatrix}$$
$$\overrightarrow{AB} = \begin{pmatrix} (-2) - 4 \\ 5 - 1 \end{pmatrix}$$
$$\overrightarrow{AB} = \begin{pmatrix} -6 \\ 4 \end{pmatrix}$$

$$|\overrightarrow{AB}| = \sqrt{x^2 + y^2}$$
$$|\overrightarrow{AB}| = \sqrt{(-6)^2 + 4^2}$$
$$|\overrightarrow{AB}| = \sqrt{36 + 16}$$
$$|\overrightarrow{AB}| = \sqrt{52}$$
$$|\overrightarrow{AB}| = 7.21$$

$$\vec{e} = \overrightarrow{AB} \div |\overrightarrow{AB}|$$
$$\vec{e} = \begin{pmatrix} (-6) \div 7.21 \\ 4 \div 7.21 \end{pmatrix}$$
$$\vec{e} = \begin{pmatrix} -0.83 \\ 0.55 \end{pmatrix}$$