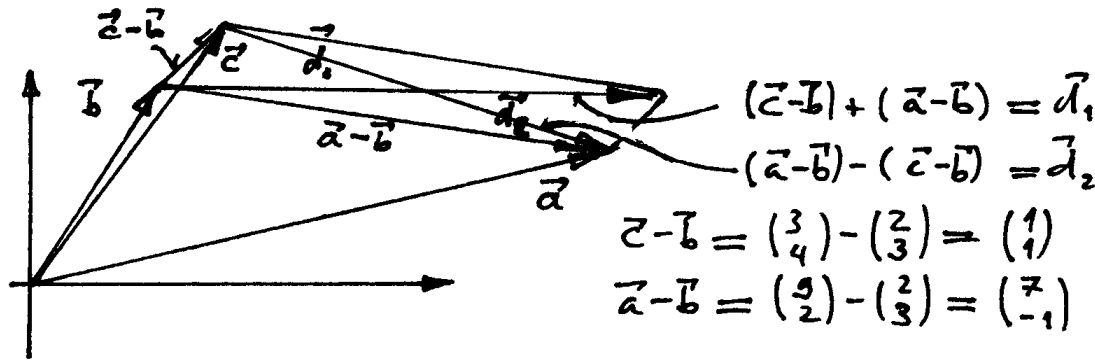
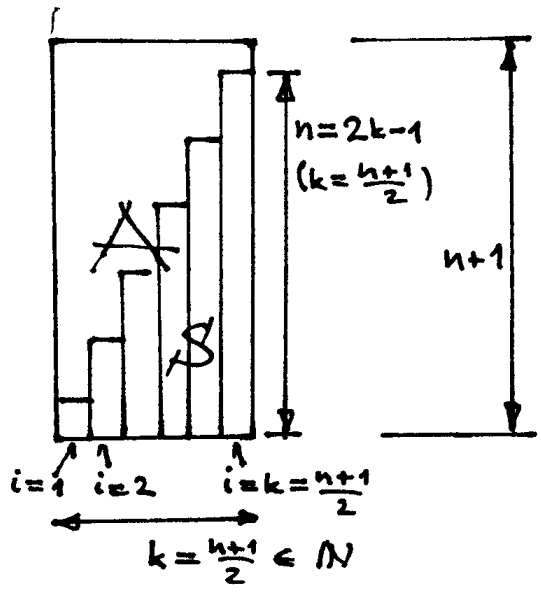


35

$$\Rightarrow \vec{d}_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix} + \begin{pmatrix} 7 \\ -1 \end{pmatrix} = \begin{pmatrix} 8 \\ 0 \end{pmatrix} \Rightarrow d_1 = |\vec{d}_1| = \sqrt{8^2 + 0^2} = \underline{\underline{8}}$$

$$d_2 = \begin{pmatrix} 7 \\ -1 \end{pmatrix} - \begin{pmatrix} 1 \\ 1 \end{pmatrix} = \begin{pmatrix} 6 \\ -2 \end{pmatrix} \Rightarrow d_2 = |\vec{d}_2| = \sqrt{6^2 + (-2)^2} = \underline{\underline{\sqrt{40} \approx 6.32}}$$

6

$$A = k \cdot (n+1) = \frac{n+1}{2} \cdot (n+1) = \frac{(n+1)^2}{2}$$

$$S = \frac{A}{2} = \frac{(n+1)^2}{4} = 1+3+5+\dots+n$$

$$n = 99'999 \Rightarrow S = \frac{100'000^2}{4}$$

$$= \frac{(10^5)^2}{4} = \frac{10^{10}}{4} = \frac{10}{4} \cdot 10^9 = 2.5 \cdot 10^9$$

$$= 2'500'000'000$$