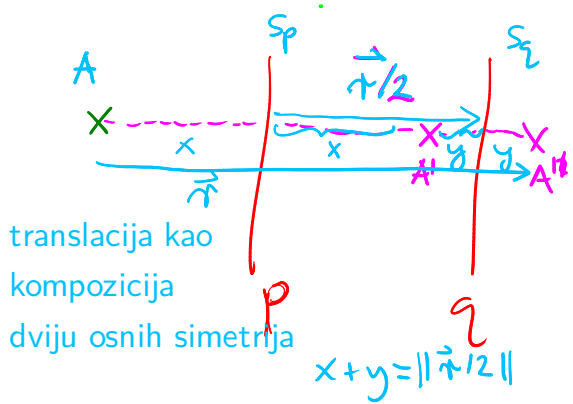


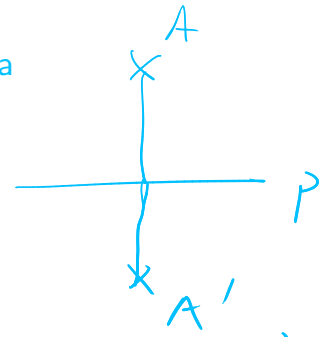
u općemo položaju transliramo da dobijemo predstavnika u poziciji l



$A \mapsto A'$
 $t_{\vec{r}}(A) = A + \vec{r}$

$d(A, p) = d(p, A')$

$\|\vec{r}\| =$ dužina dužine koje odg. vektoru \vec{r}



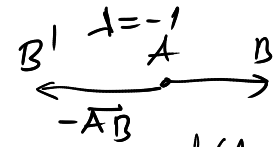
$\|\vec{r}\| = 2x + 2y$

usmjerena dužina čiji je predstavnik \vec{AB}

$\|\vec{r}\| = d(A, B) = \|\vec{AB}\| = \overline{AB}$

norma ili duljina vektora \vec{r}

oznake

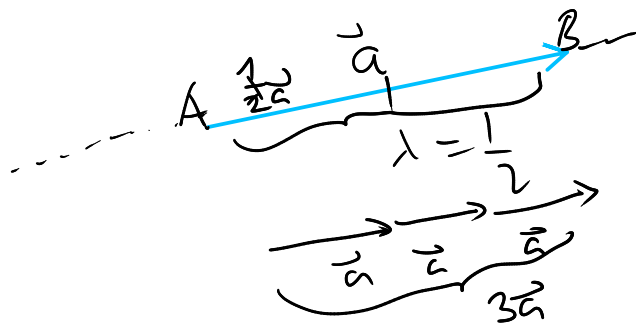


$d(A, B') = |\lambda| d(A, B)$

$\lambda(\vec{AB}) = \vec{AB}'$

množenje vektora brojem

$\lambda \in \mathbb{R} \quad \vec{a} \mapsto \lambda \vec{a}$



① $\lambda > 0$ smisao isti

① & ② $d(A, B') = |\lambda| \cdot d(A, B)$

② $\lambda < 0$ smisao suprotan

③ $\lambda = 0, \lambda \vec{a} = \vec{0}$

svojstva
(poslije
će biti
aksiomi)

$$\lambda \cdot (\vec{a} + \vec{b}) = \lambda \vec{a} + \lambda \vec{b}$$

λ SKALAR (BROJ)
 $\in \mathbb{R}$

$$1 \cdot \vec{a} = \vec{a}$$

$$\lambda (\mu \vec{a}) = (\lambda \mu) \vec{a}$$

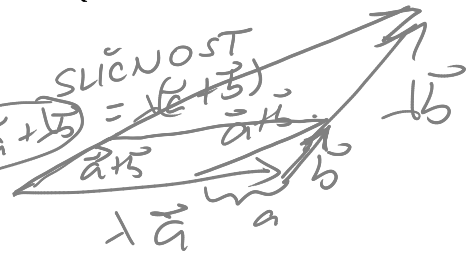
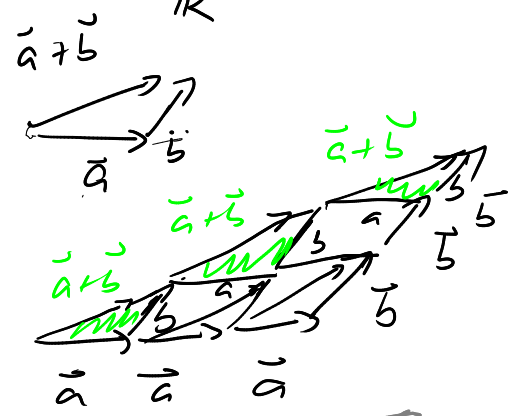
množenje brojeva

$$(\lambda + \mu) \vec{a} = \lambda \vec{a} + \mu \vec{a}$$

$$-\vec{AB} = \vec{BA}$$

$$\vec{AB} + (-\vec{AB})$$

$$= \vec{AB} + \vec{BA} = \vec{AA} = \vec{0}$$



$$\vec{AB} + \vec{0} = \vec{AB} + \vec{BB} = \vec{AB} = \vec{0} + \vec{AB}$$

$$(\vec{a} + \vec{b}) + \vec{c} \stackrel{?}{=} \vec{a} + (\vec{b} + \vec{c})$$

$$(\vec{AB} + \vec{BC}) + \vec{CD} \stackrel{?}{=} \vec{AB} + (\vec{BC} + \vec{CD})$$

$$\vec{AC} + \vec{CD} \stackrel{!}{=} \vec{AD}$$

$$\vec{AB} + \vec{BD} \stackrel{!}{=} \vec{AD}$$

Realni vektorski prostor sastoji se od Abelove grupe vektora koji su opremljeni množenjem realnih brojeva vektorima, koji zadovoljava 4 aksioma gore

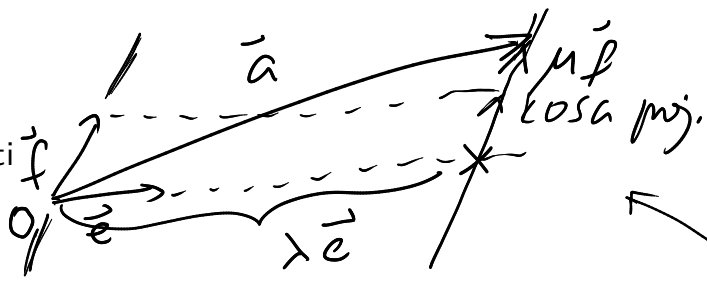
\vec{a} i \vec{b} vektori
 λ, μ brojevi

$$\lambda \vec{a} + \mu \vec{b}$$
 linearna kombinacija vektora \vec{a} i \vec{b}

$\vec{a}_1, \dots, \vec{a}_n$ vektori
 $\lambda_1, \dots, \lambda_n$ brojevi

$$\lambda_1 \vec{a}_1 + \lambda_2 \vec{a}_2 + \dots + \lambda_n \vec{a}_n$$
 l.k. $\vec{a}_1, \dots, \vec{a}_n$

kosa projekcija nam daje rastav na zbroj komponenti



$$\vec{a} = \lambda \vec{e} + \mu \vec{f}$$

