

13-2

Scalar Math. For Vectors

$$\text{Let } \vec{r} = \langle r_1, r_2 \rangle \text{ and } \vec{d} = \langle d_1, d_2 \rangle$$

↑ why not (-)? Classifies it as a vector. Same basic x,y setup, though

$$\text{sum: } \vec{r} + \vec{d} = \langle r_1 + d_1, r_2 + d_2 \rangle$$

$$\text{scalar multiplication: } k\vec{r} = \langle kr_1, kr_2 \rangle$$

$$\text{Example: Let } \vec{a} = \langle -2, 5 \rangle \text{ and } \vec{b} = \langle 3, 4 \rangle$$

$$\text{a) } 2\vec{a} = \langle -4, 10 \rangle$$

$$\text{b) } 3\vec{a} - 2\vec{b} = \langle -6, 15 \rangle - \langle 6, 8 \rangle = \langle -12, 7 \rangle$$

$$\text{c) } \frac{1}{2}\vec{a} + \vec{b} = \langle -1, 2.5 \rangle + \langle 3, 4 \rangle = \langle 2, 6.5 \rangle$$

CW/HW - worksheet 7.2