

## Space Inner Product

## Why

We want to measure angles in space.  $^{1}$ 

## **Definiton**

## Definition

The  $space\ inner\ product\ (or\ dot\ product,\ scalar\ product)$  of two real vectors  $x,y\in {\bf R}^3$  is

$$x_1y_1 + x_2y_2 + x_3y_3$$

We denote the inner product of x and y by  $\langle x, y \rangle$ .

<sup>&</sup>lt;sup>1</sup>Future editions will include pictures.

