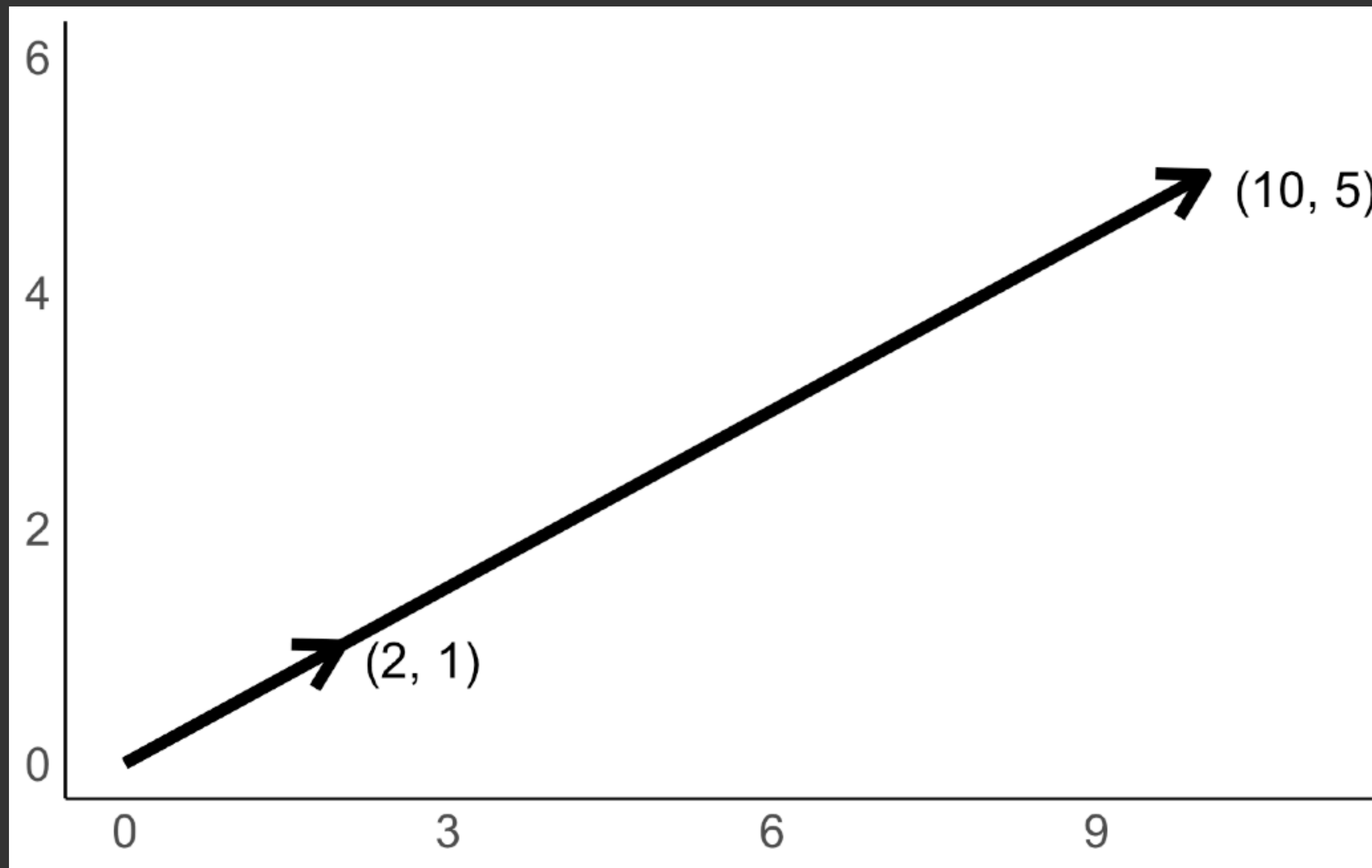


scalar multiplication

example

What is the scalar value here multiplied to $\vec{a} = [2, 1]$?



vector multiplication

Two principal ways of multiplying vectors:

1. Dot products (a.k.a. scalar products)

$$d = \vec{a} \cdot \vec{b}$$

generates a scalar value from the product of two vectors

2. Cross products

$$\vec{c} = \vec{a} \times \vec{b}$$

The cross product generates a vector from the product of two vectors