Building blocks
1. Vectors (Ch 1.1)
NT 1.1 definition of vectors
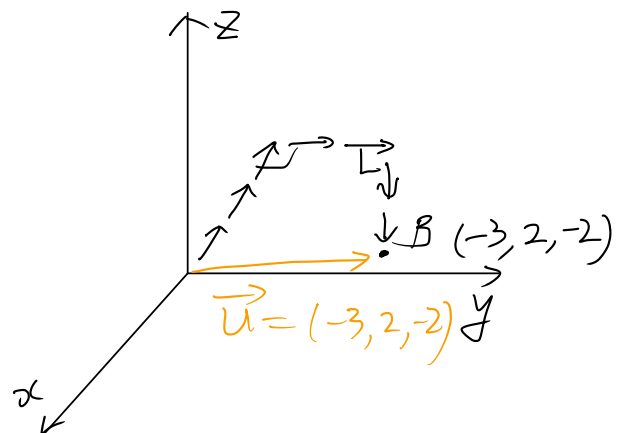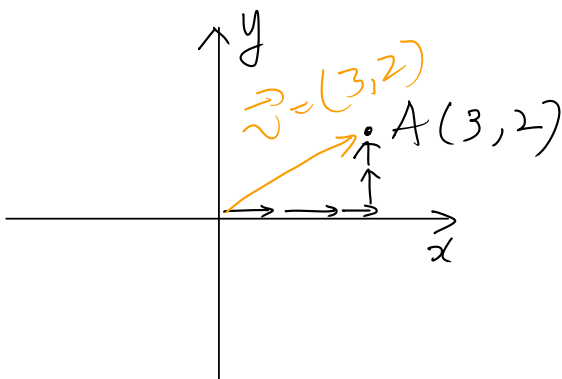
○ 2D vector is a *tuple* of two real
   numbers, called   .
   Similarly, 3D vector (or n-dim vector)
   is a *tuple* of 3 (or n) real numbers.

   ex) $(1, -3)$, $(-1.5, 0, 3.14)$, $\cdots$
       1st component   *2nd component*

○ Recall :
   We need 2 numbers to locate a
   position in 2D and 3 numbers in 3D.

◉ Naturally, we can *identify* each
point in space with a vector.

◉ We often visualize a vector as an
arrow (directed segment).

◉ Although we can conceive of (and
actually need in some situations)
arrorws starting at different points,
we usually assume it starts at
the origin, and call it **position
vector**. Other (floating) arrows are
call a **representive** of the position vector
or **free vector**.