

**Source:**

## 1 | Intuition

All of the valid outputs of the function, everything that the function can equal when fed an element of the domain.

## 2 | In the context of linear algebra (Axler 3.18)

For  $T$  a function from  $V$  to  $W$ , the *range* of  $T$  is the subset of  $W$  consisting of those vectors that are of the form  $Tv$  for some  $v \in V$ :

$$\text{range } T = \{Tv : v \in V\}$$

### 2.1 | #aka image aka

### 2.2 | #aka column space

The span of the columns

### 2.3 | See surjectivity, the property of a map whose range is it's output space.