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.