A function from a set $A$ to a set $B$ is a map or a rule that assigns to each element in $A$ an element in $B$. The rule can be expressed in words, as a picture, by a table of values, or a formula.

**Example 1:** Let $S$ be the set of all students in the Junior circle (today). Let $C$ be the set of all chairs in this room. Define a function from the set of students $S$ to the set of chairs $C$ that assigns each student the chair on which he or she sits.

1. Give two examples of elements in $S$:

2. Do we know the value of this function for every student? If not, give an example when the function is not defined.

**Example 2:** Let $S$ be the set of all students in the Junior Circle (who are in class today). Let $I$ be the set of instructors in the Junior Circle. Define a function $f : S \rightarrow I$ from the set of students $S$ to the set of instructors $I$ that assigns each student with the assistant they work with.

The value of the function $f$ on an element $s$ from $S$ is denoted by $f(s)$.

1. List the elements of $I$.

   $I =$ __________, __________, __________, __________

2. Compute the function for the following students: $f($Gavin$)$=

   $f($Colin$)$= 
3. Is there a student such that the value of the function for this student equals Preston?

4. Is $f(\text{Kristi})$ defined? Why or why not?