

## Math 4200

### Functions:

Suppose  $A$  and  $B$  are (nonempty) sets. A **function**  $f$  from  $A$  to  $B$  is a rule or correspondence by which each  $x$  in  $A$  is assigned to one and only one element of  $B$ .

The set  $A$  is called the **domain of  $f$** .

If  $x$  is an element of  $A$  and  $f$  assigns the value  $y$  to  $x$ , then we write  $y = f(x)$ .

The **image of  $f$**  is  $\{ f(x) : x \text{ is in } A \}$ .

Sometimes the set  $B$  is called the **range of  $f$** .

Algebra

Trigonometry

Calculus

What is Differential Equations ?

Linear Algebra

Modern Algebra

Geometry