

```
[ > restart;
```

You can make functions using the arrow "-->" assignment, like this:

```
f:=(x,y) -> x/y^2
```

However (for various reasons I won't go into now) I prefer to use the 'unapply' method, like this:

```
xy:=x/y^2; f:=unapply(fxy,(x,y));
```

or like this:

```
f:=unapply(x/y^2,(x,y));
```

```
> f:=unapply(x/y^2, (x,y)) ;
```

$$f := (x, y) \rightarrow \frac{x}{y^2}$$

Now we want to compute and print  $f(x, y_i)$  for an array of  $y = (y_i)$  values (and for some fixed  $x$ ). If the  $y_i$  are regularly spaced, we might express

$y_i = a + b*i$ , for example. Alternatively, we can first form an array  $Y$  of  $y$ -values, then compute and print the  $f(x, Y[i])$ .

Below, I will take  $x = 2$  and  $y = 1, 1.5, 2, 2.5, 3$ .

```
> Y:=seq(1+.5*(i-1), i=1..5) ;
```

```
Y := 1.0, 1.5, 2.0, 2.5, 3.0
```

If we want a nicely formatted print, we can use the 'printf' command, which is essentially the same as in the C language.

```
> for i from 1 to 5 do
  if (i=1) then printf("%5s %5s %10s\n", "x", "y", "f(x,y)");
  end if:
  printf("%5.1f %5.1f %10.6f\n", 2.0, Y[i], f(2.0, Y[i])):
end do:
```

```
  x      y      f(x,y)
2.0    1.0    2.000000
2.0    1.5    0.888889
2.0    2.0    0.500000
2.0    2.5    0.320000
2.0    3.0    0.222222
```

```
> i:='i';
```

```
i := i
```

```
>
```