

```
[ > 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

$y_i = a + b \cdot i$, 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';
```

$i := i$

```
>
```