```
> A:={1,2+2,3^2,3.45/3,Pi,x^2=1,Alma,infinity,-infinity};
```

$$A := \{1, 4, 9, \pi, \infty, -\infty, Alma, x^2 = 1, 1.150000000\}$$

```
> evalf(Pi);
```

$$3.141592654$$

```
> Digits:=50;
```

$$Digits := 50$$

```
> evalf(Pi);
```

$$3.1415926535897932384626433832795028841971693993751$$

```
> Digits:=10;
```

$$Digits := 10$$

```
> solve(x^2=1);
```

$$1, -1$$

```
> B:={2-1,4,15-6,infinity,Pi,Haha,Kutya};
```

$$B := \{1, 4, 9, \pi, \infty, Haha, Kutya\}$$

```
> A minus B; A union B; A intersect B;
```

$$\{-\infty, Alma, x^2 = 1, 1.150000000\}$$

$$\{1, 4, 9, \pi, \infty, -\infty, Alma, Haha, Kutya, x^2 = 1, 1.150000000\}$$

$$\{1, 4, 9, \pi, \infty\}$$

```
> member(Alma,A); member(Alma,B);
```

true

false

```
> Alma:=1; A; Alma:='Alma'; A;
```

$$Alma := 1$$

$$\{1, 4, 9, \pi, \infty, -\infty, x^2 = 1, 1.150000000\}$$

$$Alma := Alma$$

$$\{1, 4, 9, \pi, \infty, -\infty, Alma, x^2 = 1, 1.150000000\}$$

```
> whattype(1);whattype(1/2);whattype(1.2);whattype(Pi);whattype(Al
  ma);whattype(infinity);
```

integer

fraction

float

symbol

symbol

symbol

```
> Alma,Kutya,1,6;
```

$$Alma, Kutya, 1, 6$$

```
> %[3],%[4],%[1],%[2];
```

$$1, 6, Alma, Kutya$$

```
> a:=[Alma,Kutya,1,6]; a[3]; a[4]; a[1]; a[2];
```

$$a := [Alma, Kutya, 1, 6]$$

$$1$$
$$6$$
$$Alma$$
$$Kutya$$

```
> a:={[1,Alma],[1,Kutya],[2,Pi],[Pi,3]};
```

$$a := \{[1, Alma], [1, Kutya], [2, \pi], [\pi, 3]\}$$

```
> map(y->y[1],a);map(y->y[2],a);
```

$$\{1, 2, \pi\}$$
$$\{3, \pi, Alma, Kutya\}$$

```
> f2:=x->x^2;
```

$$f2 := x \to x^2$$

```
> f3:=x->x^3;
```

$$f3 := x \to x^3$$

```
> f1:=x->x/x;
```

$$f1 := 1$$

```
> f:=sin;
```

$$f := \sin$$

```
> f@f2;f2@f;(f2@f)@f3;(f@f2)(2);(f2@f)(2);(f2@f@f3)(2);
>
```

$$\sin@f2$$
$$f2@\sin$$
$$f2@\sin@f3$$
$$\sin(4)$$
$$\sin(2)^2$$
$$\sin(8)^2$$

```
> D[1](f2+f3);D[1](f@f2);D[1](f2@f);D[1](f2@f@f3);
```

$$(x \to 2\,x) + (x \to 3\,x^2)$$
$$\cos@f2\ (x \to 2\,x)$$
$$(x \to 2\,x)@\sin\ \cos$$
$$(x \to 2\,x)@\sin@f3\ \cos@f3\ (x \to 3\,x^2)$$

```
> D[1](f@f2);D[1]
```

$$\cos@f2\ (x \to 2\,x)$$