

> 2+5 ;

7

> 123^456 ;

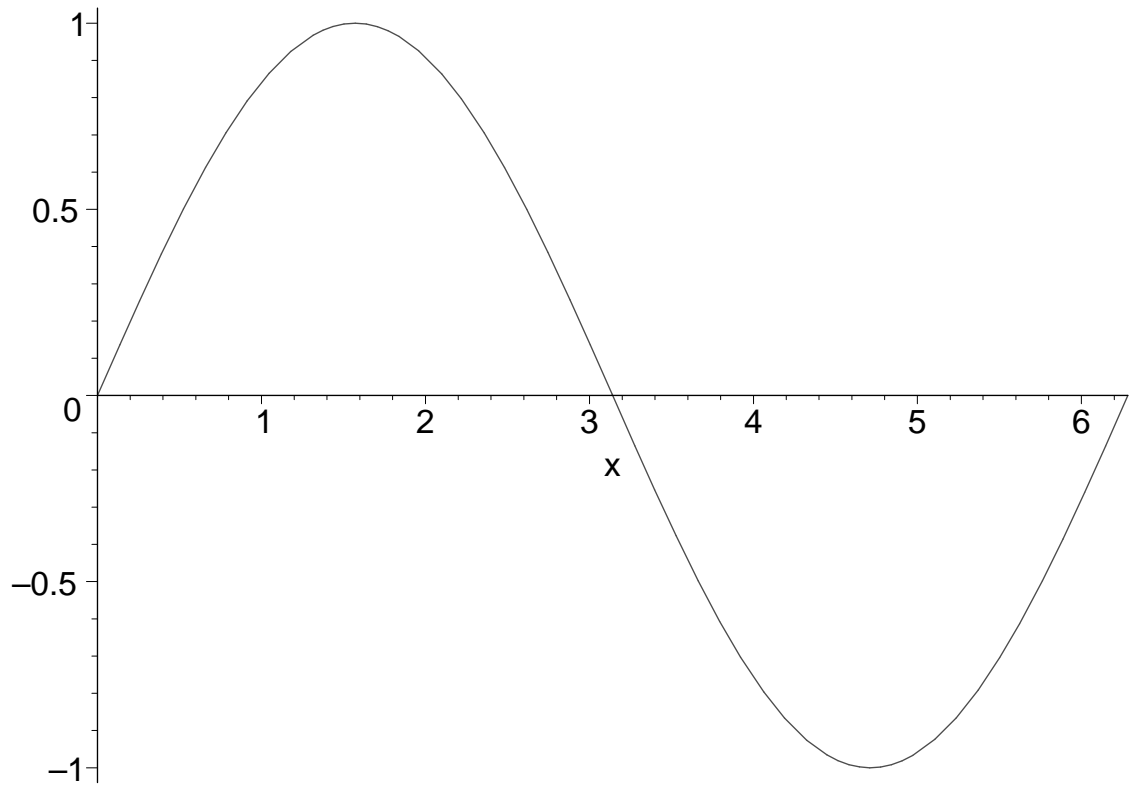
9925006877209885670083146205746963263729594081988\  
6900519816298881382867104749399077921128661426144\  
6380554242369362718724928003527416499021181438196\  
7260156999810012079049675951763646544589562574160\  
9866209900500198407153244604778968016963028050310\  
2614176159144687299182406854878786176459769390634\  
6435798616571173097639947850764922868634146696716\  
7910126653342134942744851463899927487092486610977\  
1461127635671016726459531321964814393398730170881\  
4041466127119850033325571309614233515141463065168\  
3065518784081203678487703002802082091236603519026\  
2568806244996817813872275740354848312715156831237\  
4214909556926046360965597770093884458061193124649\  
5166208695540313698140011638027322566252689780838\  
1363518287953142721621112222311709017156123557013\  
4755237153001369385537983486566706001464330245910\  
0429783653966913783002290784283455628283355470529\  
9329560514844771293338811599302127586876027950885\  
7923043166169601023218739043660161414560324190238\  
6663442520160735566561

> (a+b)^2 ;

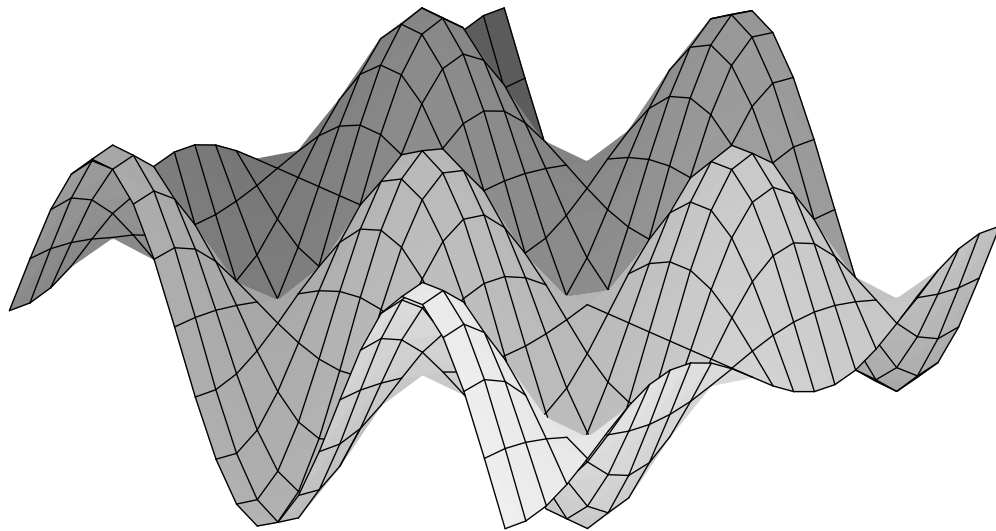
```

[
      (a + b)^2
> expand(%);
      a^2 + 2 a b + b^2
> collect((a+b)^3+(a-b)^2,b);
      b^3 + (3 a + 1) b^2 + (3 a^2 - 2 a) b + a^3 + a^2
> diff(%,b);
      3 b^2 + 2 (3 a + 1) b + 3 a^2 - 2 a
> int(tan(a*x),x);
      1 ln(1 + tan(a x)^2)
      2 a
> int(tan(x),x);
      -ln(cos(x))
> int(tan(a*x),x=0..Pi/a);
      0
> int(tan(x),x=0..Pi);
      undefined
> series(tan(x),x=0,15);
x + 1/3 x^3 + 2/15 x^5 + 17/315 x^7 + 62/2835 x^9 + 1382/155925 x^11 + 21844/6081075 x^13 +
O(x^15)
> plot(sin(x),x=0..2*Pi);

```



```
> plot3d(sin(x)*cos(y),x=-5..5,y=-5..5);
```



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

3.141592654

```
> evalf(Pi, 200);
```

3.14159265358979323846264338327950288419716939937\  
5105820974944592307816406286208998628034825342117\  
0679821480865132823066470938446095505822317253594\  
0812848111745028410270193852110555964462294895493\  
03820

```
> 5!;
```

120

```
> u:=(log(n!+1)-log(n!))*n!;
```

$$u := (\ln(n! + 1) - \ln(n!)) n!$$

> n:=13;

$$n := 13$$

> u;

$$6227020800 \ln(6227020801) - 6227020800 \ln(6227020800)$$

> evalf(u, 20);

$$1.000000000$$

> I\*I;

$$-1$$

> (2+4\*I)\*(5+6\*I);

$$-14 + 32 I$$

> 1/(Pi+I);

$$\frac{1}{\pi + I}$$

> evalc(%);

$$\frac{\pi}{\pi^2 + 1} - \frac{I}{\pi^2 + 1}$$

> abs(%);

$$\sqrt{\frac{\pi^2}{(\pi^2 + 1)^2} + \frac{1}{(\pi^2 + 1)^2}}$$

> simplify(%);

$$\frac{1}{\sqrt{\pi^2 + 1}}$$

> x+y;

$$x + y$$

```
[ > 23 ;
                                23
[ > %+1 ;
                                24
[ > %%% ;
                                x + y
[ >
[ >
```