

Jalase9-G1

```

> restart;
> p := scanf("%a") [1];


p := x

 (1)

> f := unapply(p, x);


f := x → x

 (2)

> isprime(17);


true

 (3)

> restart;
> listprime1 := proc()
local k, c, n;
n := scanf(`%d`) [1];
c := 1;
for k from 2 to n do
if isprime(k) = true then
print(c, ` `, k, ` is a prime number`);
c := c + 1;
fi;
od;
end:
> listprime1();
1, , 2, is a prime number
2, , 3, is a prime number
3, , 5, is a prime number
4, , 7, is a prime number
5, , 11, is a prime number
6, , 13, is a prime number
7, , 17, is a prime number
8, , 19, is a prime number


(4)



> restart;
> listprime2 := proc(n)
local k, c;
c := 1;
for k from 2 to n do
if isprime(k) = true then
print(c, ` `, k, ` is a prime number` );
c := c + 1;
fi;
od;
end:
> listprime2(10);
1, , 2, is a prime number
2, , 3, is a prime number
3, , 5, is a prime number
4, , 7, is a prime number


(5)


```

```

> restart;
> printf("%20.3d", 234);
234
> printf("%g %g %g\n", 123, 123/456, 123456789);
123 0.269737 1.23457e+08
> printf("%10.2s:%7.3s:%20.10s\n", MM, Map, Maplereahdae);
MM:      Map:          Maplereahd
> x := 23; y := -1/x;
x := 23
y := -1
23
(6)

> sprintf("x = %d, y = %g", x, y);
"x = 23, y = -0.0434783"
(7)

> restart;
> sprintf("%d", 34);
"34"
(8)

> printf("%10.3d", 123);
123
> printf("%20.5a", x + 1);
x+1
> printf("%10.2f%20.3f", 1.44, 1.2345);
1.44           1.234
> print(" this is a simple print");
" this is a simple print"
(9)

> int(x^2 - 2 * x + 1, x=0 .. 3);
3
(10)

> Int(x^2 - 2 * x + 1, x=0 .. 3) = int(x^2 - 2 * x + 1, x=0 .. 3);
int(3
0
x^2 - 2 x + 1 dx = 3
(11)

> Int(sin(x + 1), x=0 .. Pi/2) = int(sin(x + 1), x=0 .. Pi/2);
int(1
0
2
pi
sin(x + 1) dx = cos(1) + sin(1)
(12)

> Int(sin(x + 1), x) = int(sin(x + 1), x);
int(sin(x + 1) dx = -cos(x + 1)
(13)

> Int(1/(x^4 + 1), x) = int(1/(x^4 + 1), x);
int(1
0
x^4 + 1 dx = 1/8 sqrt(2) ln((x^2 + x*sqrt(2) + 1)/(x^2 - x*sqrt(2) + 1)) + 1/4 sqrt(2) arctan(x*sqrt(2) + 1) + 1/4 sqrt(2) arctan(x*sqrt(2) - 1)
(14)

```

$$\begin{aligned}
 > \text{Sum}\left(\frac{1}{k^2 + k - 1}, k = 1 \dots infinity\right) &= \text{sum}\left(\frac{1}{k^2 + k - 1}, k = 1 \dots infinity\right); \\
 &\sum_{k=1}^{\infty} \frac{1}{k^2 + k - 1} = 1 + \frac{1}{5} \sqrt{5} \pi \tan\left(\frac{1}{2} \pi \sqrt{5}\right)
 \end{aligned} \tag{15}$$

$$\begin{aligned}
 > \text{Int}(\text{abs}(x + 1), x = -4 .. 4); \\
 &\int_{-4}^4 |x + 1| dx
 \end{aligned} \tag{16}$$

$$\begin{aligned}
 > \text{Int}(\text{abs}(x + 1), x = -4 .. 4) &= \text{int}(\text{abs}(x + 1), x = -4 .. 4); \\
 &\int_{-4}^4 |x + 1| dx = 17
 \end{aligned} \tag{17}$$

> $\text{plot}(\text{abs}(x + 1), x = -4 .. 4);$

