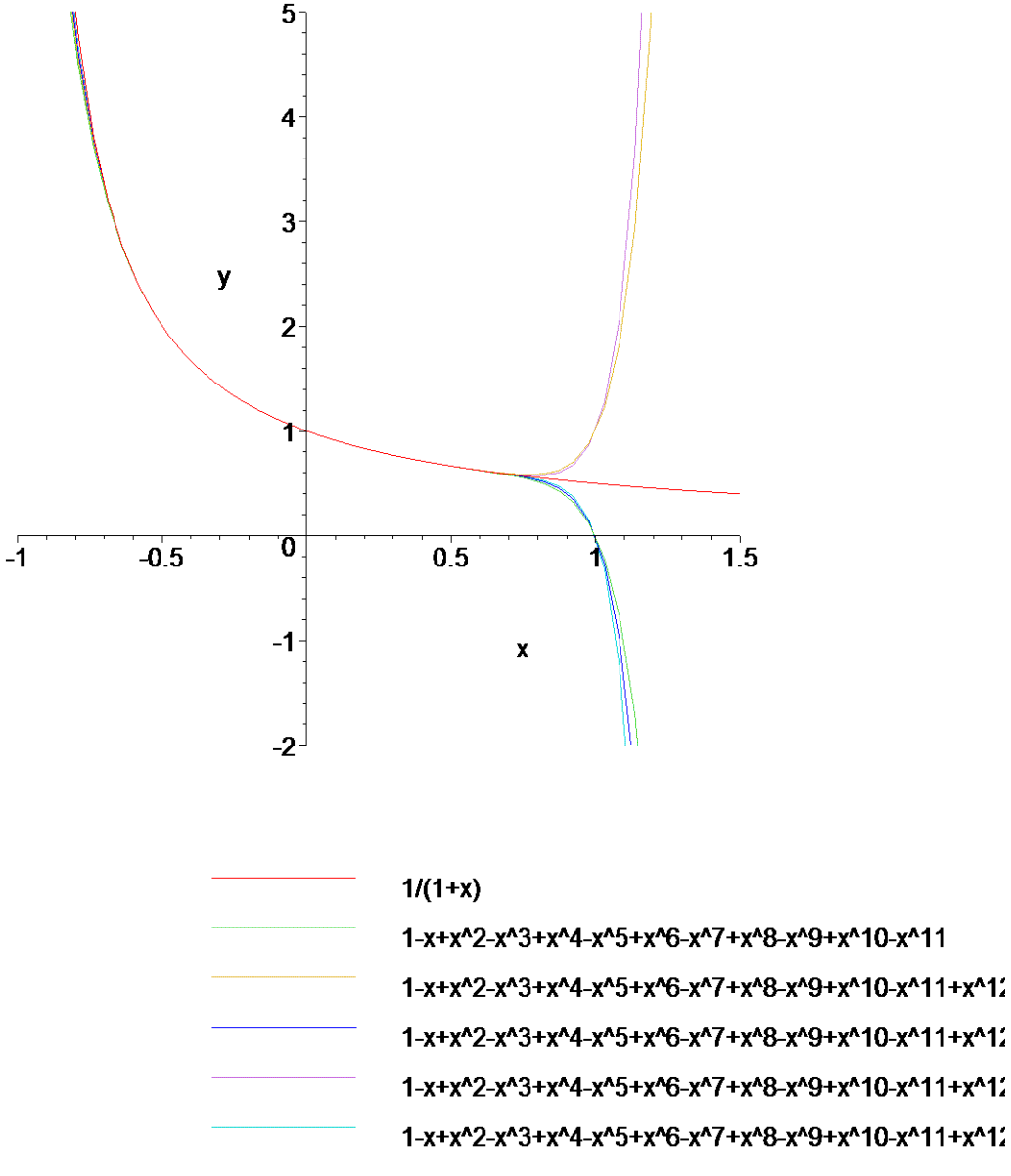
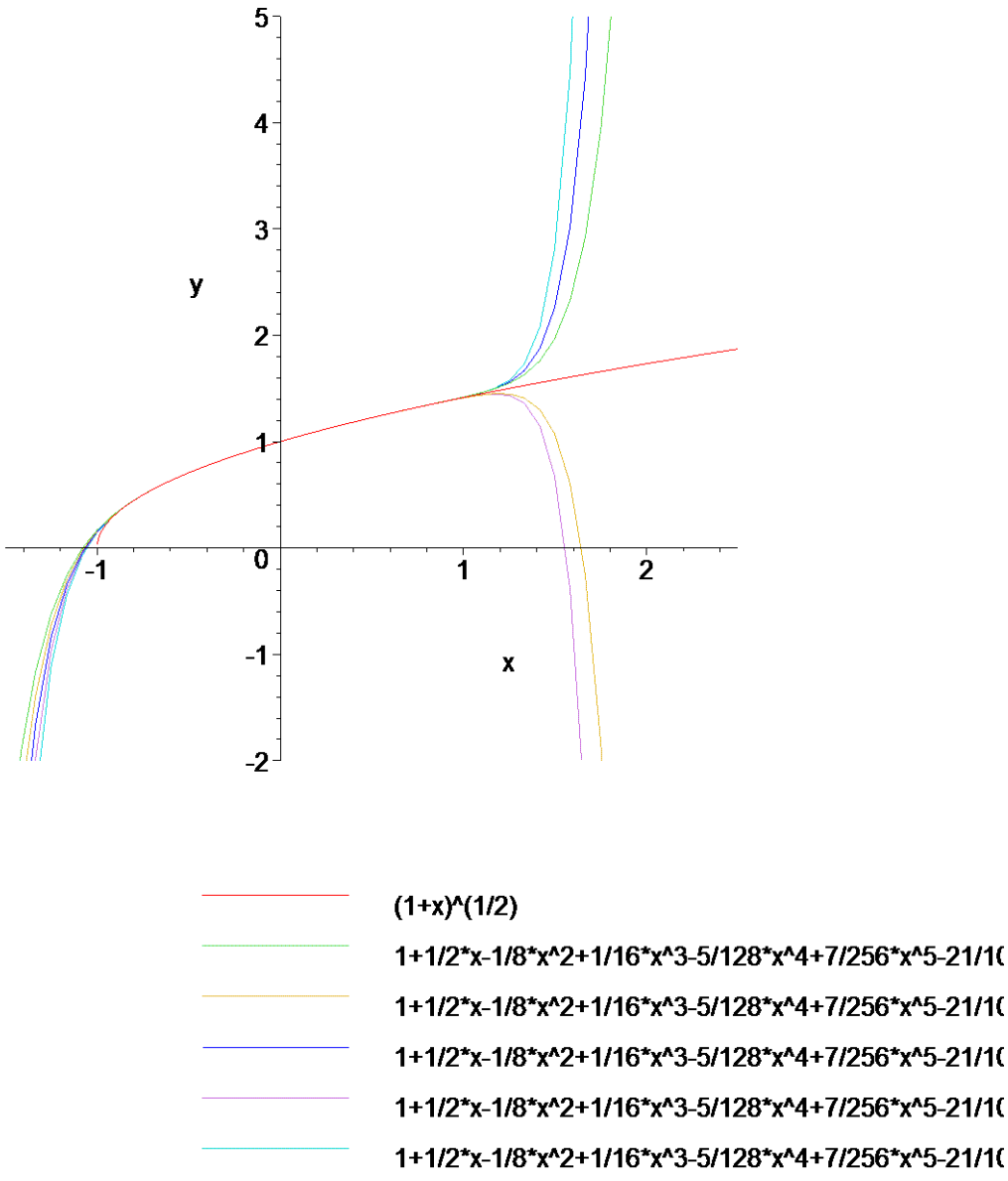
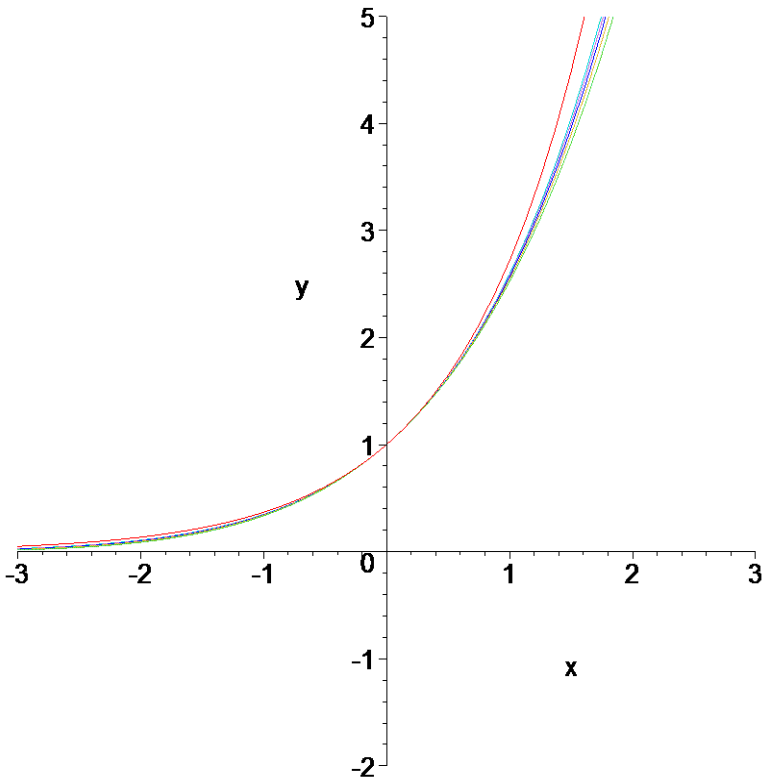
```
> restart;
> for i from 1 to 15 do
> f[i] := convert(series(1/(1+x),x=0,i+1),polynom);
> end do:
> plot([1/(1+x),seq(f[i],i=11..15)],x=-1..1.5,y=-2..5,legend=['1/(
  1+x)',seq('f'[i],i=11..15)]);
```

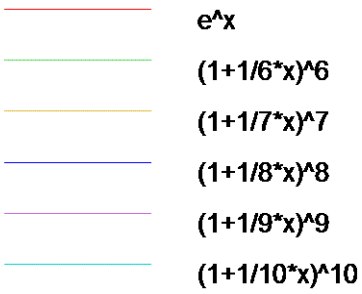



```
> for i from 1 to 15 do
> g[i] := convert(series((1+x)^(1/2),x=0,i+1),polynom);
> end do:
> plot([(1+x)^(1/2),seq(g[i],i=11..15)],x=-1.5..2.5,y=-2..5,legend
  =['(1+x)^(1/2)',seq('g[i]',i=11..15)]);
```

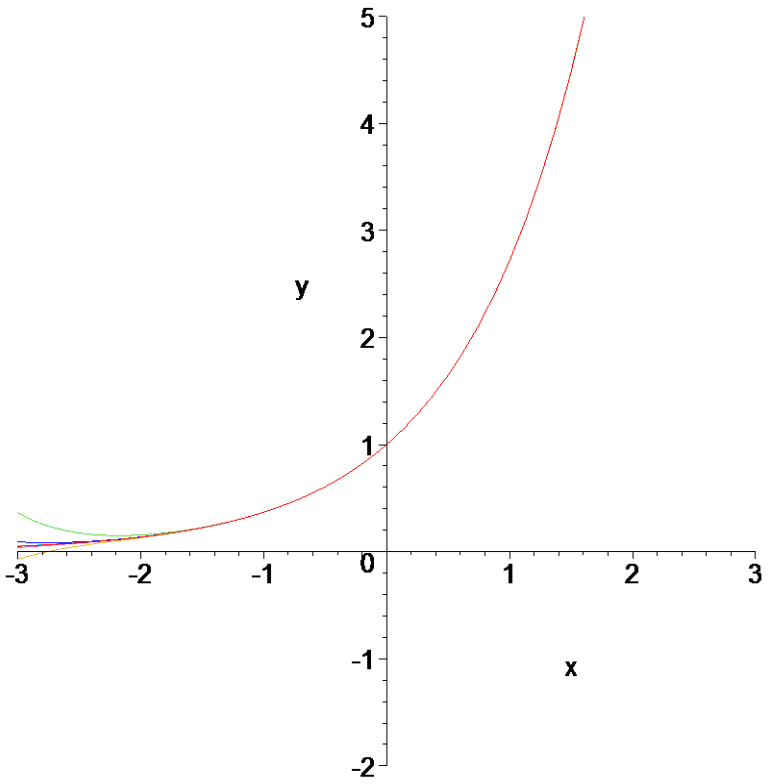



```
> for i from 1 to 15 do
> h[i] := (1+x/i)^i;
> r[i] := convert(series(exp(x),x=0,i+1),polynom);
> end do:
> plot([exp(x),seq(h[i],i=6..10)],x=-3..3,y=-2..5,legend=['e^x',se
  q('h[i]',i=6..10)]);
```






```
> plot([exp(x),seq(r[i],i=6..10)],x=-3..3,y=-2..5,legend=['e^x',se
  q('r[i]',i=6..10)]);
```



e^x

1+x+1/2*x^2+1/6*x^3+1/24*x^4+1/120*x^5+1/720*x^6

1+x+1/2*x^2+1/6*x^3+1/24*x^4+1/120*x^5+1/720*x^6

1+x+1/2*x^2+1/6*x^3+1/24*x^4+1/120*x^5+1/720*x^6

1+x+1/2*x^2+1/6*x^3+1/24*x^4+1/120*x^5+1/720*x^6

1+x+1/2*x^2+1/6*x^3+1/24*x^4+1/120*x^5+1/720*x^6

```
> for i from 1 to 15 do
> e[i] := evalf(subs(x=1,h[i]));
> end do;
```

$$e_1 := 2.$$

$$e_2 := 2.250000000$$

$$e_3 := 2.370370370$$

$$e_4 := 2.441406250$$

$$e_5 := 2.488320000$$

$$e_6 := 2.521626372$$

$$e_7 := 2.546499697$$

$$e_8 := 2.565784514$$

$$e_9 := 2.581174792$$

$$e_{10} := 2.593742460$$

$$e_{11} := 2.604199012$$

$$e_{12} := 2.613035290$$

$$e_{13} := 2.620600888$$

$$e_{14} := 2.627151556$$

$$e_{15} := 2.632878718$$

>