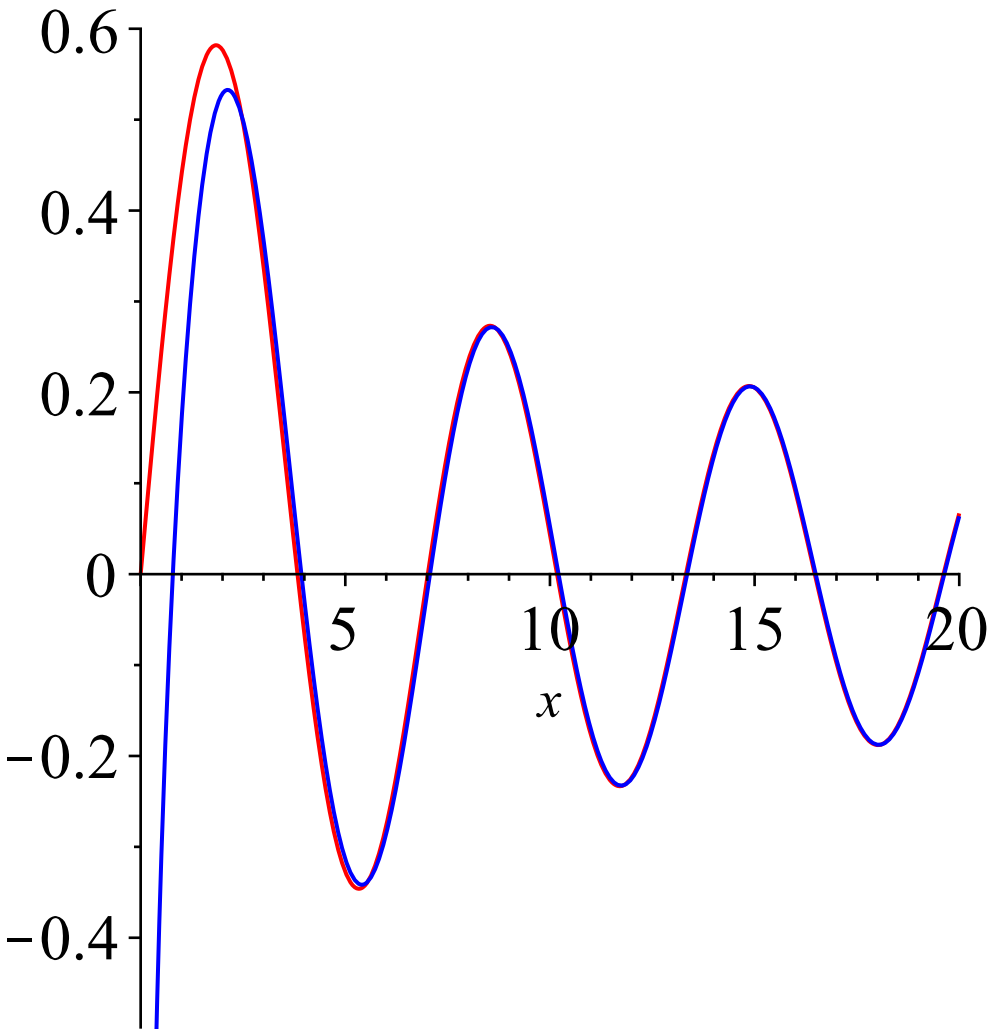
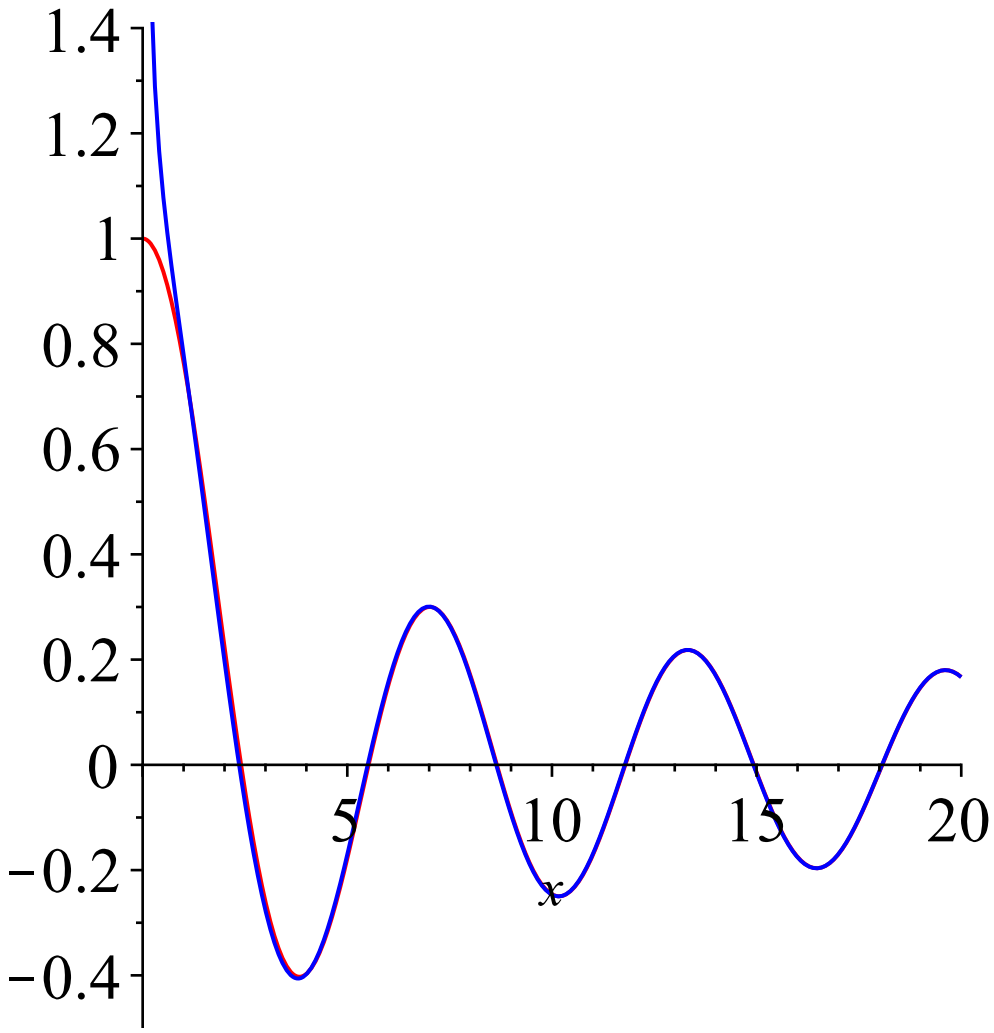
```
> plot([BesselJ(1,x),(sqrt(2/(Pi*x)))*cos(x-3*Pi/4)],x=0..20,color=
  [red,blue]);
```



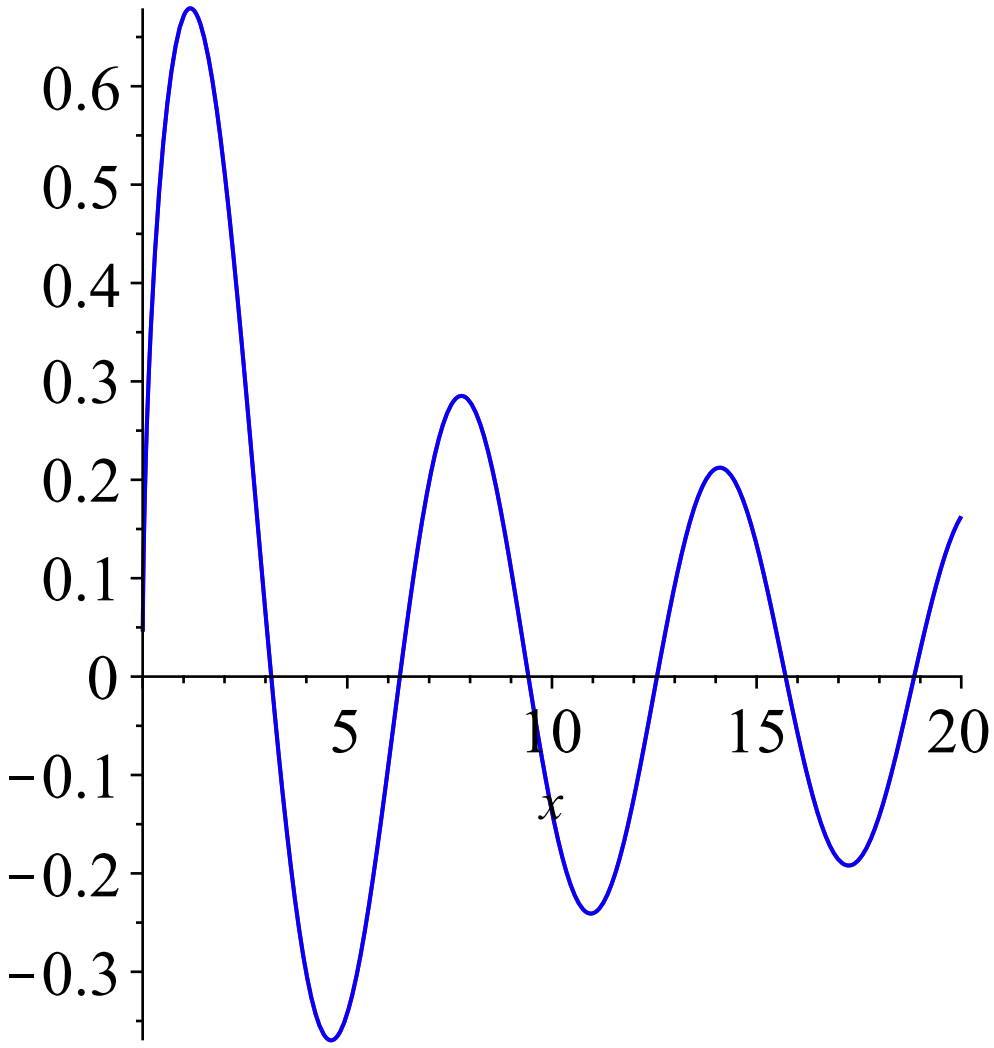

```
> #Bessel J_1 (red) plotted together with its apprixomation (blue)
```

```
> plot([BesselJ(0,x),(sqrt(2/(Pi*x))*cos(x-Pi/4))],x=0..20,color=
  [red,blue]);
```



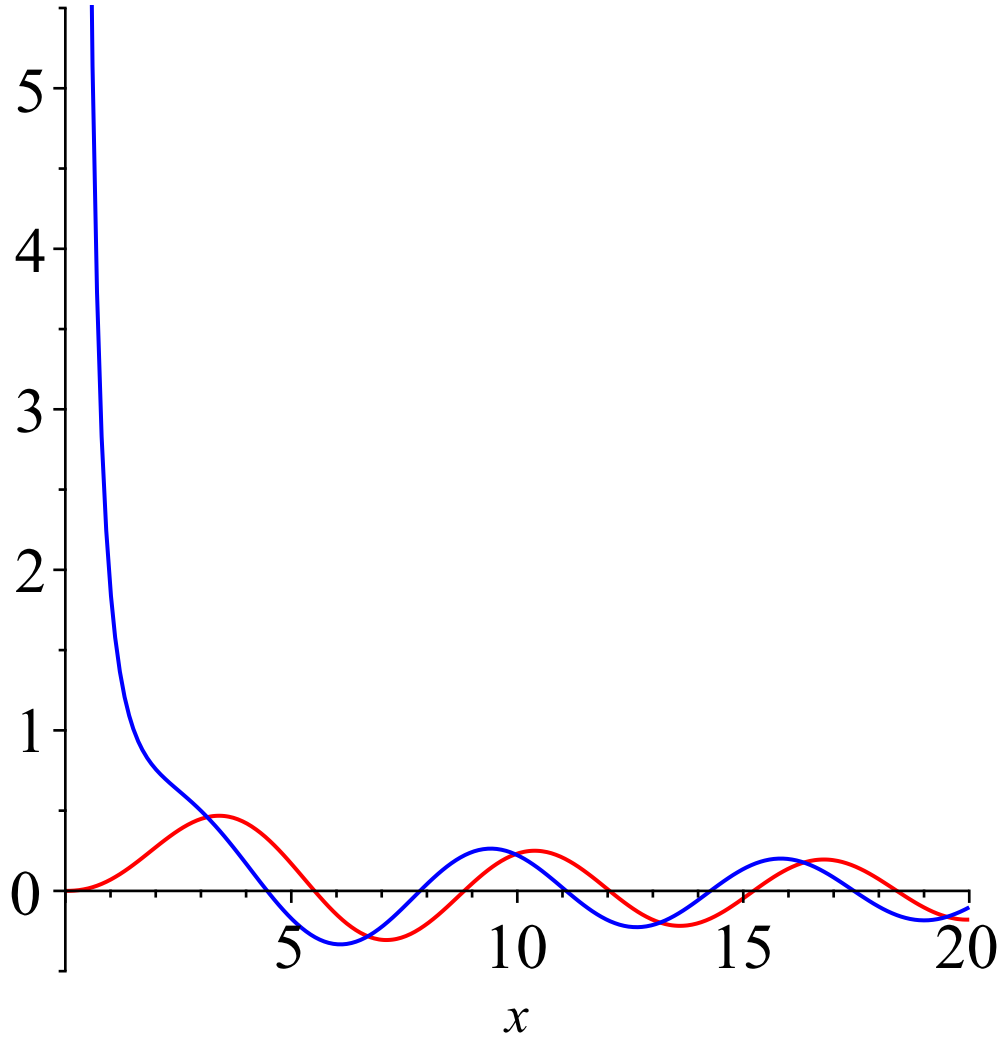

```
> #Bessel J_0 (red) plotted together with its approximation (blue)
```

```
> plot([BesselJ(1/2,x),(sqrt(2/(Pi*x)))*sin(x)],x=0..20,color=[red,
  blue]);
```



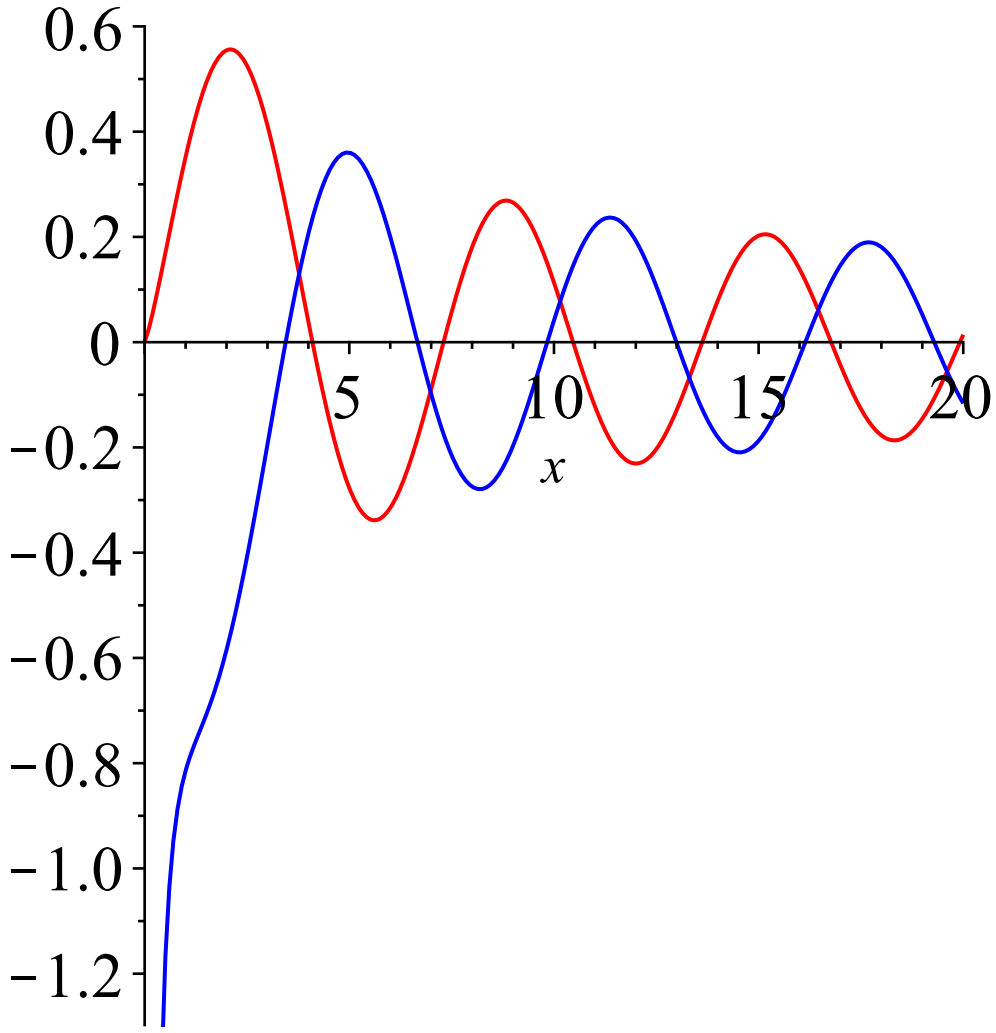

```
> #For half-integer index, Bessel function is elementary, for
  example, J_{1/2}(x)=(sqrt(2/(Pi*x)))*sin(x):
```

```
> plot([BesselJ(2.3,x),BesselJ(-2.3,x)],x=0..20,color=[red,blue]);
```



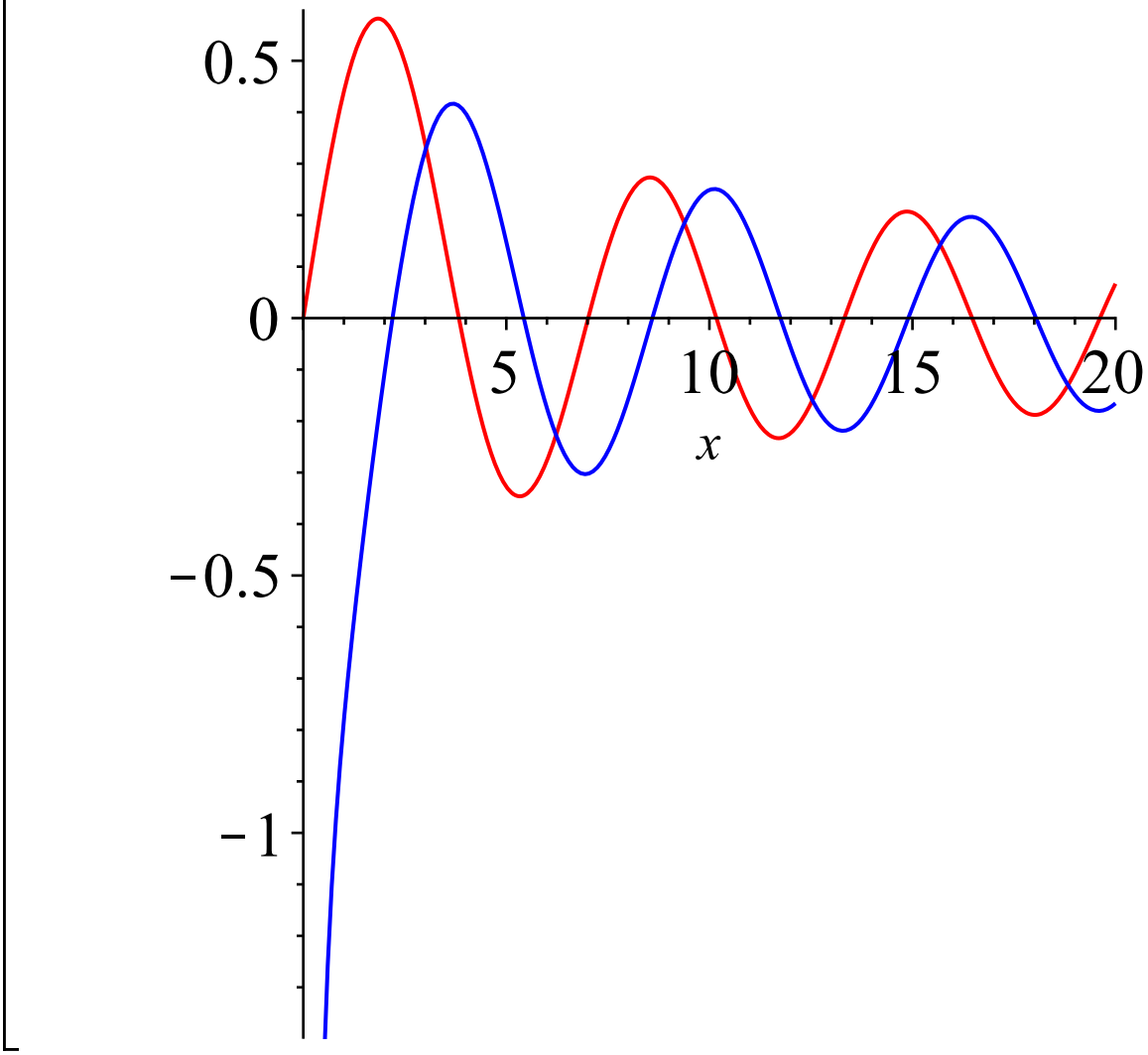

```
> #Two linearly independent solutions of Bessel's equation for nu=
  2.3:
```

```
> plot([BesselJ(1.2,x),BesselJ(-1.2,x)],x=0..20,color=[red,blue]);
```



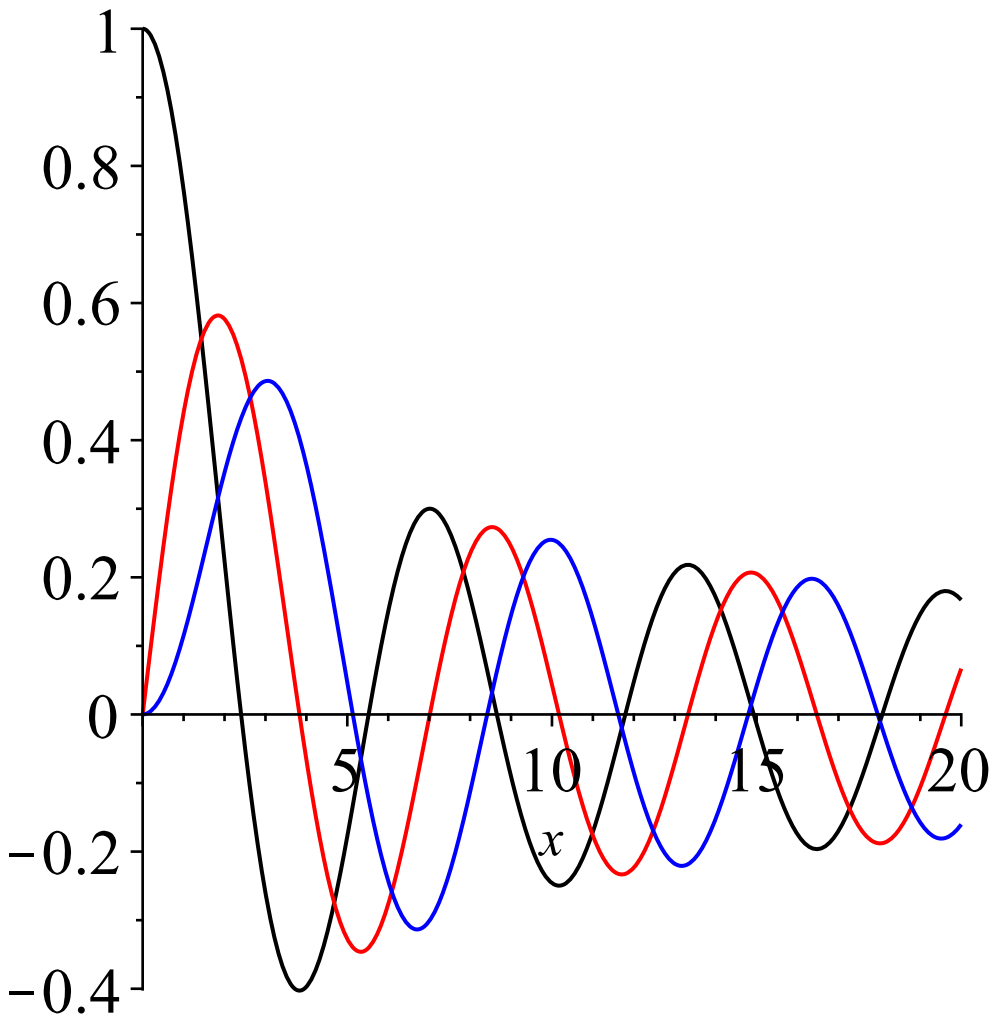

```
> #Two linearly independent solutons of Bessel eq for nu=1.2:
```

```
> plot([BesselJ(1,x),BesselY(1,x)],x=0..20,color=[red,blue]);
```




```
> #Two linearly independent solutions of Bessel eq for nu=1:
```

```
> #Bessel functions with different indices:
> plot([BesselJ(0,x),BesselJ(1,x),BesselJ(2,x)],x=0..20,color=
  [black,red,blue]);
```




```
> #Bessel functions with different indices:
```