In[7]:=
```
2 + 2
```

Out[7]= 4

In[141]:=
```
Integrate[Log[x^2 + 1]^2 Exp[-m x], {x, 0, Infinity}]
```

Out[141]=
$$\text{ConditionalExpression}\left[\frac{1}{6\,m}\left(6\,\text{EulerGamma}^2+\pi^2+6\,\pi^2\,\text{Cos}[m]-12\,\text{EulerGamma}\,\text{Log}[2]+6\,\text{Log}[2]^2+12\,\text{EulerGamma}\,\text{Log}[m]-12\,\text{Log}[2]\,\text{Log}[m]+6\,\text{Log}[m]^2-12\,\text{EulerGamma}\,\pi\,\text{Sin}[m]+12\,\pi\,\text{Log}[2]\,\text{Sin}[m]-12\,\pi\,\text{Log}[m]\,\text{Sin}[m]+6\sqrt{m}\,\sqrt{2\pi}\left(\text{EulerGamma}+\text{Log}\left[\frac{m}{2}\right]\right)\text{BesselJ}^{(1,0)}\left[-\frac{1}{2},m\right]+6\sqrt{2}\,\sqrt{m}\,\pi^{3/2}\,\text{BesselJ}^{(1,0)}\left[\frac{1}{2},m\right]-6\,\text{EulerGamma}\,\sqrt{m}\,\sqrt{2\pi}\,\text{StruveH}^{(1,0)}\left[\frac{1}{2},m\right]+\sqrt{m}\,\sqrt{2\pi}\,\text{Log}[64]\,\text{StruveH}^{(1,0)}\left[\frac{1}{2},m\right]-6\sqrt{m}\,\sqrt{2\pi}\,\text{Log}[m]\,\text{StruveH}^{(1,0)}\left[\frac{1}{2},m\right]+3\sqrt{m}\,\sqrt{2\pi}\,\text{BesselJ}^{(2,0)}\left[-\frac{1}{2},m\right]+3\sqrt{m}\,\sqrt{2\pi}\,\text{StruveH}^{(2,0)}\left[\frac{1}{2},m\right]\right),\text{Re}[m]>0\right]$$

In[36]:=
```
Integrate[Log[x + 1] Exp[-0.5 x^0.5], x]
```

Out[36]=
$$\int e^{-0.5\,x^{0.5}}\,\text{Log}[1+x]\,dx$$

In[70]:=
```
Integrate[Log[x^2 + 1] / (x^2 + 1) x, x]
```

Out[70]=
$$\frac{1}{4}\,\text{Log}\left[1+x^2\right]^2$$

In[53]:=
```
Integrate[Log[x^2 + 1]^2 * 1 / x^3, x]
```

Out[53]=
$$-\frac{\left(1+x^2\right)\,\text{Log}\left[1+x^2\right]^2+2\,x^2\,\text{PolyLog}\left[2,-x^2\right]}{2\,x^2}$$

In[102]:=
```
Integrate[1 / (x) Exp[-m x], x]
```

Out[102]=
$$\text{ExpIntegralEi}[-m\,x]$$

In[67]:=
```
Integrate[Exp[m i] ExpIntegralEi[-m (x + i)] 2 x / (1 + x^2), {x, 0 , Infinity}]
```

Out[67]=
$$\int_0^\infty \frac{2\,e^{i\,m}\,x\,\text{ExpIntegralEi}[-m\,(i+x)]}{1+x^2}\,dx$$

In[107]:=
```
Integrate[Log [x^2 + 1] / (x^2 + 1) x, x]
```

Out[107]=
$$\frac{1}{4}\,\text{Log}\left[1+x^2\right]^2$$

In[100]:=
```
Integrate[1 / (x^2 + 1) (-m x)^9, x]
```

Out[100]=
$$-\frac{1}{24}\,m^9\left(-25-12\,x^2+6\,x^4-4\,x^6+3\,x^8+12\,\text{Log}\left[1+x^2\right]\right)$$

In[136]:=
```
Integrate[x^4 / (x^2 + 1) Exp[-m x] , {x, 0, Infinity} ]
```

Out[136]=
$$\text{ConditionalExpression}\left[\frac{\text{MeijerG}\left[\left\{\left\{-\frac{3}{2}\right\},\{\}\right\},\left\{\left\{-\frac{3}{2},0,\frac{1}{2}\right\},\{\}\right\},\frac{m^2}{4}\right]}{2\sqrt{\pi}},\text{Re}[m]>0\right]$$

In[135]:=
```
Integrate[4 * x^4 / ((x^2 + 2) ^2 ) Exp[-m x] , {x, 0, Infinity}]
```

Out[135]=
$$\text{ConditionalExpression}\left[\frac{1}{m}\left(4-3\sqrt{2}\,m\,\pi\,\text{Cos}\left[\sqrt{2}\,m\right]+2\,m^2\,\pi\,\text{Sin}\left[\sqrt{2}\,m\right]-\right.\right.$$
$$2\,m\,\text{CosIntegral}\left[\sqrt{2}\,m\right]\left(2\,m\,\text{Cos}\left[\sqrt{2}\,m\right]+3\sqrt{2}\,\text{Sin}\left[\sqrt{2}\,m\right]\right)+$$
$$\left.\left.2\,m\left(3\sqrt{2}\,\text{Cos}\left[\sqrt{2}\,m\right]-2\,m\,\text{Sin}\left[\sqrt{2}\,m\right]\right)\text{SinIntegral}\left[\sqrt{2}\,m\right]\right),\text{Re}[m]>0\right]$$

In[131]:=
```
Integrate[2 * y / (y + 1) ^1.5 Exp[- m y^0.5] , y]
```

Out[131]=
$$2\int\frac{e^{-m\,y^{0.5}}\,y}{(1+y)^{1.5}}\,dy$$

Integrate::idiv : Integral of $\frac{y}{(1+y)^{1.5}}$ does not converge on $\{0,\infty\}$. ≫

In[132]:=
```
Integrate[2 * y / ((y + 2) (y + 1) ) Exp[-m y ^0.5] , {y, 0, Infinity}]
```

In[142]:=
```
Integrate[Log[x^2 + 1] / (x^2 + 1) Exp[-m x], {x, 0, Infinity}]
```

Out[142]=
$$\text{ConditionalExpression}\left[\right.$$
$$\frac{1}{8}\left(-4\,\text{EulerGamma}\,\pi\,\text{Cos}[m]+\pi\,\text{Cos}[m]\,\text{Log}[16]-4\,\pi\,\text{Cos}[m]\,\text{Log}[m]-2\,\pi^2\,\text{Sin}[m]+\right.$$
$$2\sqrt{2}\,\sqrt{m}\,\pi^{3/2}\,\text{BesselJ}^{(1,0)}\left[-\frac{1}{2},m\right]-2\sqrt{m}\,\sqrt{2\pi}\left(\text{EulerGamma}+\text{Log}\left[\frac{m}{2}\right]\right)$$
$$\text{BesselJ}^{(1,0)}\left[\frac{1}{2},m\right]-2\,\text{EulerGamma}\,\sqrt{m}\,\sqrt{2\pi}\,\text{StruveH}^{(1,0)}\left[-\frac{1}{2},m\right]+$$
$$\sqrt{m}\,\sqrt{2\pi}\,\text{Log}[4]\,\text{StruveH}^{(1,0)}\left[-\frac{1}{2},m\right]-2\sqrt{m}\,\sqrt{2\pi}\,\text{Log}[m]\,\text{StruveH}^{(1,0)}\left[-\frac{1}{2},m\right]-$$
$$\left.\sqrt{m}\,\sqrt{2\pi}\,\text{BesselJ}^{(2,0)}\left[\frac{1}{2},m\right]+\sqrt{m}\,\sqrt{2\pi}\,\text{StruveH}^{(2,0)}\left[-\frac{1}{2},m\right]\right),\text{Re}[m]>0\left.\right]$$