In[1]:=
$$\int \frac{1 + x + \sqrt{x}}{\sqrt{x}}\, dx$$

Out[1]=
$$2\sqrt{x} + x + \frac{2 x^{3/2}}{3}$$

In[2]:=
$$\int \frac{x^3}{1 + x^4}\, dx$$

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

In[3]:=
$$\int \text{Tan}[x]\, dx$$

Out[3]=
$$-\text{Log}[\text{Cos}[x]]$$

In[4]:=
$$\int \frac{x}{1 + x^2}\, dx$$

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

In[5]:=
$$\int 2^t\, 4^t\, dt$$

Out[5]=
$$\frac{8^t}{\text{Log}[8]}$$

In[6]:=
$$\int \text{Sin}[a\, x]\, dx$$

Out[6]=
$$-\frac{\text{Cos}[a\, x]}{a}$$

In[7]:=
$$\int x\sqrt{4 + 2\, x^2}\, dx$$

Out[7]=
$$\frac{1}{2}\left(\frac{4}{3} + \frac{2\, x^2}{3}\right)\sqrt{4 + 2\, x^2}$$

In[8]:=
$$\int (2\, x - 6)^7\, dx$$

Out[8]=
$$\frac{1}{16}(-6 + 2\, x)^8$$

In[9]:=
$$\int \frac{x}{\sqrt{9 - 4\, x^2}}\, dx$$

Out[9]=
$$-\frac{1}{4}\sqrt{9 - 4\, x^2}$$

In[12]:=
$$\int \sqrt{7 - 5\, x}\, dx$$

Out[12]=
$$\sqrt{7 - 5\, x}\left(-\frac{14}{15} + \frac{2\, x}{3}\right)$$

In[13]:=
$$\int (\text{Sin}[x])^2\, \text{Cos}[x]\, dx$$

Out[13]=
$$\frac{\text{Sin}[x]}{4} - \frac{1}{12}\text{Sin}[3\, x]$$

In[14]:=
$$\int \frac{1}{x^2 - x - 1}\, dx$$

Out[14]=
$$-\frac{2\,\text{ArcTanh}\left[\frac{-1+2x}{\sqrt{5}}\right]}{\sqrt{5}}$$

In[15]:=
$$\int \frac{1}{x^2 - 6x + 9}\, dx$$

Out[15]=
$$-\frac{1}{-3 + x}$$

In[16]:=
$$\int \frac{1}{x^2 + 2x + 3}\, dx$$

Out[16]=
$$\frac{\text{ArcTan}\left[\frac{1+x}{\sqrt{2}}\right]}{\sqrt{2}}$$

In[18]:=
$$\int x\,\text{Sin}[x]\, dx$$

Out[18]=
$$-x\,\text{Cos}[x] + \text{Sin}[x]$$

In[19]:=
$$\int x\,\text{Cos}[x]\, dx$$

Out[19]=
$$\text{Cos}[x] + x\,\text{Sin}[x]$$

In[20]:=
$$\int x^2\,\text{Exp}[x]\, dx$$

Out[20]=
$$e^x\,(2 - 2x + x^2)$$

In[21]:=
$$\int \text{Log}[3x]\, dx$$

Out[21]=
$$-x + x\,\text{Log}[3x]$$

In[22]:=
$$\int x\,\text{ArcTan}[2x]\, dx$$

Out[22]=
$$-\frac{x}{4} + \frac{1}{8}\,\text{ArcTan}[2x] + \frac{1}{2}\,x^2\,\text{ArcTan}[2x]$$

In[23]:=
$$\int x^2\,\text{Log}[x]\, dx$$

Out[23]=
$$-\frac{x^3}{9} + \frac{1}{3}\,x^3\,\text{Log}[x]$$

In[24]:=
$$\int e^x\,\text{Sin}[2x]\, dx$$

Out[24]=
$$-\frac{2}{5}\,e^x\,\text{Cos}[2x] + \frac{1}{5}\,e^x\,\text{Sin}[2x]$$

In[25]:=
$$\int e^{3x}\,\text{Cos}[x]\, dx$$

Out[25]=
$$\frac{3}{10}\,e^{3x}\,\text{Cos}[x] + \frac{1}{10}\,e^{3x}\,\text{Sin}[x]$$

In[26]:= $\int \mathbf{x\,(Sin[x])^2\,dx}$

Out[26]= $\frac{x^2}{4} - \frac{1}{8}\,\mathrm{Cos}[2\,x] - \frac{1}{4}\,x\,\mathrm{Sin}[2\,x]$

In[27]:= $\int \mathbf{x^2\,Cos[x]\,dx}$

Out[27]= $2\,x\,\mathrm{Cos}[x] + (-2 + x^2)\,\mathrm{Sin}[x]$