

In[22]:= **Log**[**x**^2]

Out[22]= $\text{Log}\left[x^2\right]$

In[23]:= **Simplify**[% , **x** > 0]

Out[23]= $2 \text{Log}\left[x\right]$

In[24]:= **Log**[**e**^{**x**}]

Out[24]= $\text{Log}\left[e^x\right]$

In[25]:= **Simplify**[% , **Element**[**x**, **Reals**]]

Out[25]= x

In[26]:= **Sin**[((2 **n** + 1) * **Pi**) / 2]

Out[26]= $\text{Sin}\left[\frac{1}{2} (1 + 2 n) \pi\right]$

In[27]:= **Simplify**[% , **Element**[**n**, **Integers**]]

Out[27]= $(-1)^n$

In[28]:= **Cot**[**ArcSin**[**Cos**[**ArcTan**[(\sqrt{e})^{**Log**[**x**]}]]]]]

Out[28]= $\sqrt{1+x} \sqrt{1 - \frac{1}{1+x}}$

In[29]:= **Simplify**[% , **x** > 0]

Out[29]= \sqrt{x}

In[40]:= **Sin**[2 * **Pi** - **x**] * **Cos**[(**Pi** / 2) + **x**] + 1 / (**Csc**[(17 * **Pi** / 2) + **x**] * **Sec**[8 * **Pi** + **x**])

Out[40]= $\text{Cos}\left[x\right]^2 + \text{Sin}\left[x\right]^2$

In[35]:= **Sin**[2 * **Pi** - **x**] * **Cos**[(**Pi** / 2) + **x**] + 1 / (**Csc**[(17 * **Pi** / 2) + **x**] * **Sec**[8 * **Pi** + **x**])

Out[35]= $\text{Cos}\left[x\right]^2 + \text{Sin}\left[x\right]^2$

In[36]:= **Simplify**[%]

Out[36]= 1

$$\text{In[38]:= Sin}[2 \text{ Pi} - \mathbf{x}] * \text{Cos}[\text{Pi} / 2 + \mathbf{x}] + \frac{1}{\text{Csc}[17 \text{ Pi} / 2 + \mathbf{x}] * \text{Sec}[8 \text{ Pi} + \mathbf{x}]}$$

$$\text{Out[38]= Cos}[\mathbf{x}]^2 + \text{Sin}[\mathbf{x}]^2$$

$$\text{In[39]:= Simplify}[\%]$$

$$\text{Out[39]= 1}$$

Simplify::nonopt : Options expected (instead of z > 0) beyond position 2 in

$$\text{Simplify}\left[\sqrt{\frac{x}{y^3}} \sqrt{\frac{y}{z^3}} \sqrt{\frac{z}{x^3}}, x > 0, y > 0, z > 0\right]. \text{ An option must be a rule or a list of rules. } \gg$$

$$\text{In[1]:= } \sqrt{\frac{\mathbf{x}}{\mathbf{y}^3}} * \sqrt{\frac{\mathbf{y}}{\mathbf{z}^3}} * \sqrt{\frac{\mathbf{z}}{\mathbf{x}^3}}$$

$$\text{Out[1]= } \sqrt{\frac{\mathbf{x}}{\mathbf{y}^3}} \sqrt{\frac{\mathbf{y}}{\mathbf{z}^3}} \sqrt{\frac{\mathbf{z}}{\mathbf{x}^3}}$$

$$\text{In[2]:= Simplify}[\%, \mathbf{x} > 0 \&\& \mathbf{y} > 0 \&\& \mathbf{z} > 0]$$

$$\text{Out[2]= } \frac{1}{\mathbf{x} \mathbf{y} \mathbf{z}}$$

$$\text{Factor}[\mathbf{x}^2 - 5 * \mathbf{x} + 6]$$