

■ A Correct Simplification for Arcsin(sin(x)).

```
In[1]:= n[x_] = Floor[x/Pi + 1/2]
```

```
Out[1]= Floor[ $\frac{1}{2} + \frac{x}{\pi}$ ]
```

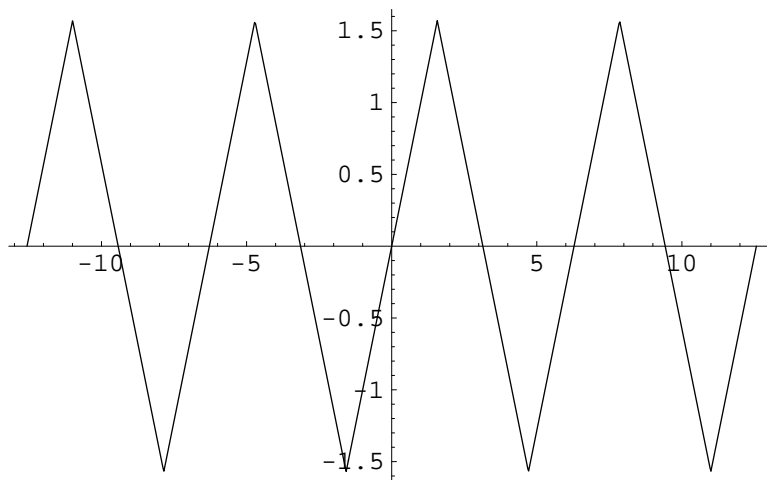
```
In[2]:= f[x_] = ArcSin[Sin[x]]
```

```
Out[2]= ArcSin[Sin[x]]
```

```
In[3]:= g[x_] = (x - Pi*n[x]) * (-1)^n[x]
```

```
Out[3]=  $(-1)^{\text{Floor}[\frac{1}{2} + \frac{x}{\pi}]} \left( x - \pi \text{Floor}[\frac{1}{2} + \frac{x}{\pi}] \right)$ 
```

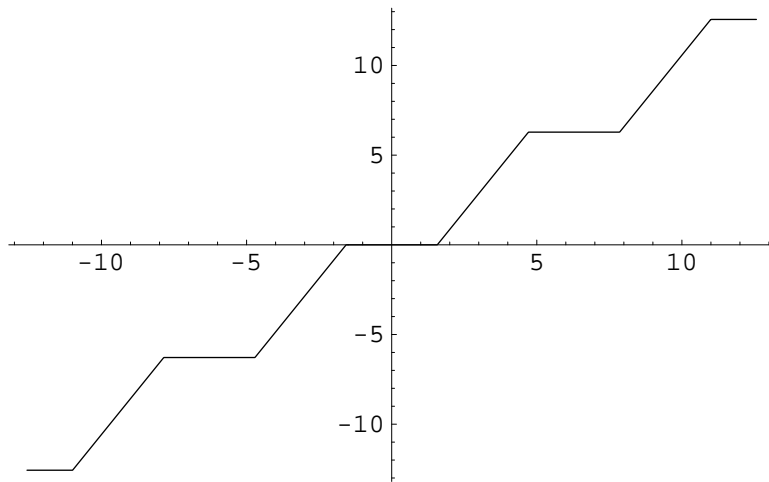
```
In[7]:= Plot[f[x], {x, -4 Pi, 4 Pi}]
```



```
Out[7]= - Graphics -
```



```
In[10]:= Plot[x - g[x], {x, -4 Pi, 4 Pi}]
```



```
Out[10]= - Graphics -
```