

## Линейная интерполяция величин, участвующих в расчетах

### Точка 2 цикла

#### CO<sub>2</sub>:

```
In[28]:= u2CO2Interpolation =  
Interpolation[{{703.15, 487.0}, {708.15, 491.7}}, InterpolationOrder → 1]
```

Out[28]=

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[32]:= u2CO2 = Quantity[u2CO2Interpolation[706.253],  
"Kilojoules"  
"Kilograms"]
```

Out[32]=

489.917 kJ/kg

```
In[33]:= h2CO2Interpolation =  
Interpolation[{{703.15, 619.8}, {708.15, 625.4}}, InterpolationOrder → 1]
```

Out[33]=

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[34]:= h2CO2 = Quantity[h2CO2Interpolation[706.253],  
"Kilojoules"  
"Kilograms"]
```

Out[34]=

623.275 kJ/kg

```
In[40]:= s02CO2Interpolation =  
Interpolation[{{703.15, 5.703}, {708.15, 5.711}}, InterpolationOrder → 1]
```

Out[40]=

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[41]:= s02CO2 = Quantity[s02CO2Interpolation[706.253],  
"Kilojoules"  
"Kilograms" * "Kelvins"]
```

Out[41]=

5.70796 kJ / (kg K)

#### Ar:

```
In[44]:= u2ArInterpolation =  
Interpolation[{{703.15, 219.5}, {708.15, 221.1}}, InterpolationOrder → 1]
```

Out[44]=

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[46]:= u2Ar = Quantity[u2ArInterpolation[706.253`],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"}}$ ]
```

```
Out[46]=
```

220.493 kJ/kg

```
In[49]:= h2ArInterpolation =  
Interpolation[{{703.15, 365.9}, {708.15, 368.5}}, InterpolationOrder → 1]
```

```
Out[49]=
```

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[50]:= h2Ar = Quantity[hT2ArInterpolation[706.253`],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"}}$ ]
```

```
Out[50]=
```

367.514 kJ/kg

```
In[51]:= s02ArInterpolation =  
Interpolation[{{703.15, 4.323}, {708.15, 4.326}}, InterpolationOrder → 1]
```

```
Out[51]=
```

InterpolatingFunction[ Domain: {{703., 708.}}  
Output: scalar]

```
In[52]:= s02Ar = Quantity[s02ArInterpolation[706.253],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms" * "Kelvins"}}$ ]
```

```
Out[52]=
```

4.32486 kJ / (kg K)

## Точка 5 цикла CO2:

```
In[175]:=
```

```
u5CO2Interpolation =  
Interpolation[{{353.15, 194.0}, {358.15, 197.6}}, InterpolationOrder → 1]
```

```
Out[175]=
```

InterpolatingFunction[ Domain: {{353., 358.}}  
Output: scalar]


```
In[177]:=
```

```
u5CO2 = Quantity[u5CO2Interpolation[355.783],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"}}$ ]
```

```
Out[177]=
```

195.896 kJ/kg

```
In[178]:=
h5C02Interpolation =
  Interpolation[{{353.15, 260.7}, {358.15, 265.2}}, InterpolationOrder → 1]
```

```
Out[178]=
InterpolatingFunction[ Domain: {{353., 358.}}
Output: scalar]
```

```
In[179]:=
h5C02 = Quantity[h5C02Interpolation[355.783],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"}}$ ]
```

```
Out[179]=
263.07 kJ/kg
```

```
In[180]:=
s05C02Interpolation =
  Interpolation[{{353.15, 5.005}, {358.15, 5.018}}, InterpolationOrder → 1]
```


```
Out[180]=
InterpolatingFunction[ Domain: {{353., 358.}}
Output: scalar]
```

```
In[181]:=
s05C02 = Quantity[s05C02Interpolation[355.783],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"} * \text{"Kelvins"}}$ ]
```

```
Out[181]=
5.01185 kJ/(kg K)
```

Ar:


```
In[182]:=
u5ArInterpolation =
  Interpolation[{{353.15, 110.2}, {358.15, 111.8}}, InterpolationOrder → 1]
```

```
Out[182]=
InterpolatingFunction[ Domain: {{353., 358.}}
Output: scalar]
```

```
In[183]:=
u5Ar = Quantity[u5ArInterpolation[355.783],  $\frac{\text{"Kilojoules"}}{\text{"Kilograms"}}$ ]
```

```
Out[183]=
111.043 kJ/kg
```

```
In[184]:=
h5ArInterpolation =
  Interpolation[{{353.15, 183.7}, {358.15, 186.3}}, InterpolationOrder → 1]
```

```
Out[184]=
InterpolatingFunction[ Domain: {{353., 358.}}
Output: scalar]
```

In[186]:=

$$\mathbf{h5Ar = Quantity\left[h5ArInterpolation[355.783], \frac{\text{"Kilojoules"}}{\text{"Kilograms"}}\right]}$$

Out[186]=

185.069 kJ/kg

In[187]:=

$$\mathbf{s05ArInterpolation = Interpolation[\{\{353.15, 3.964\}, \{358.15, 3.971\}\}, InterpolationOrder \rightarrow 1]}$$

Out[187]=

$$\mathbf{InterpolatingFunction\left[\begin{array}{|c|} \hline \text{Domain: }\{\{353., 358.\}\} \\ \hline \text{Output: scalar} \\ \hline \end{array}\right]}$$

In[188]:=

$$\mathbf{s05Ar = Quantity\left[s05ArInterpolation[355.783], \frac{\text{"Kilojoules"}}{\text{"Kilograms"} * \text{"Kelvins"}}\right]}$$

Out[188]=

3.96769 kJ/(kg K)