



```
In[82]:= U_t = 15
          U_BE = 0.6
          beta = 29
          R_1 = R_2 = 8200
          R_B = 1000
          R_C = 300
          R_E = 60
```

$$U_{AB} = U_t \times \frac{R_1}{R_1 + R_2}$$

```
Out[89]= 15
          2
```

```
In[90]:= R_AB = (R_1 * R_2) / (R_1 + R_2)
```

```
Out[90]= 4100
```

```
In[91]:= Solve[U_AB == I_B * {R_AB + R_B} + U_BE + {1 + beta} * I_B * R_E, I_B]
```

```
Out[91]= Solve[15/2 == {7.5}, {0.001}]
```

```
In[92]:= tehat :
          I_B = 0.001
          I_C = I_B * beta
```

```
Out[93]= {0.029}
```

```
In[94]:= I_E = {1 + beta} * I_B
```

```
Out[94]= {0.03}
```

```
In[95]:= U_CE = U_t - U_C - U_E = U_t - {I_C * R_C} - {I_E * R_E}
```

```
Out[95]= {{4.5}}
```

```
In[96]:= U_BC = U_BE + U_E - U_t + U_C = U_BE + {I_E * R_E} - U_t + {I_C * R_C}
```

```
Out[96]= {{-3.9}}
```

$$P_{U_t} = U_t \times \{I_C + I_{R2}\}$$