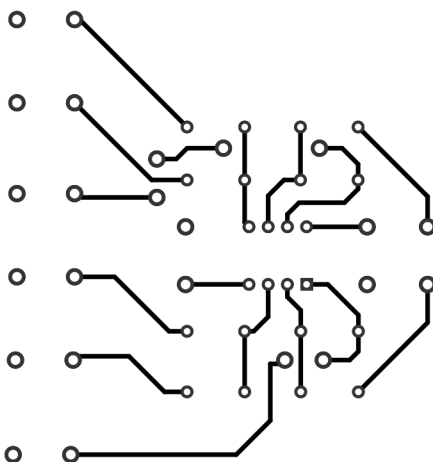SUM

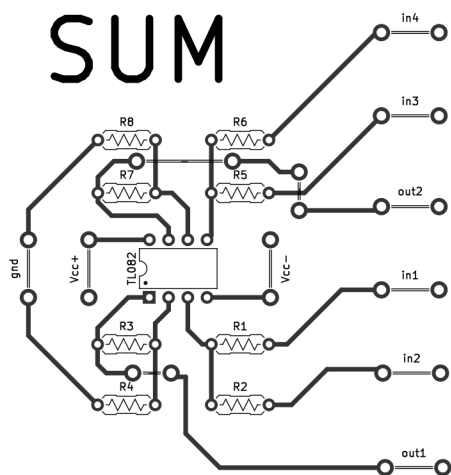**Summation Paper Circuit**
Sums two signals' voltage.
$$V_{out} = V_1 + V_2$$
Recommended values:
R#: 10kΩ
Vcc+: +12V
Vcc-: −12v
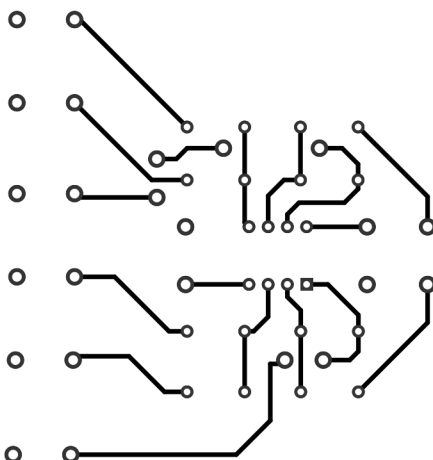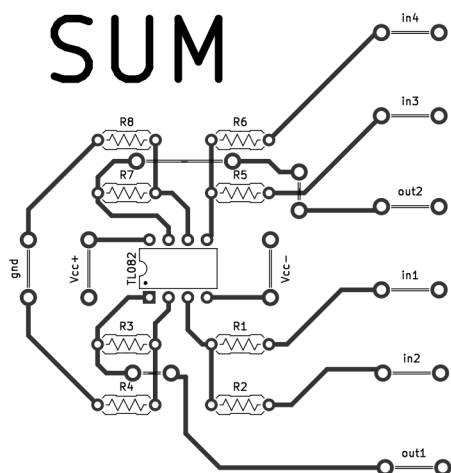Try to use low tolerances.

TL082 max voltage output is:
±[|supply| − 2]V
Using ±12V supply means ±10V out.

SUM

Differential Paper Circuit
Takes the difference of two signals' voltage.
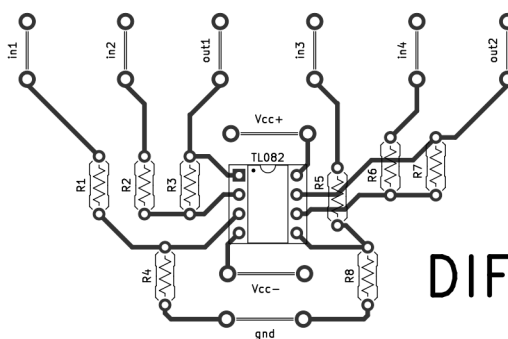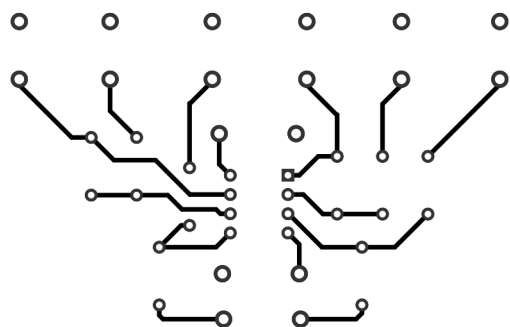$$V_{out} = V_1 - V_2$$
Recommended values:
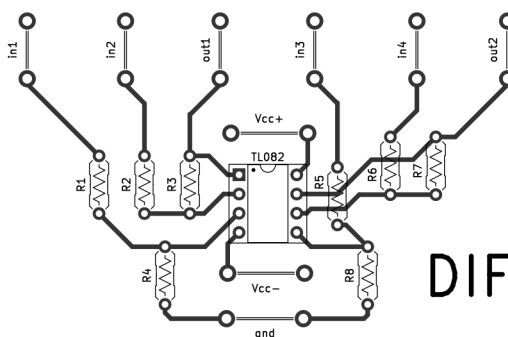R#: 10kΩ
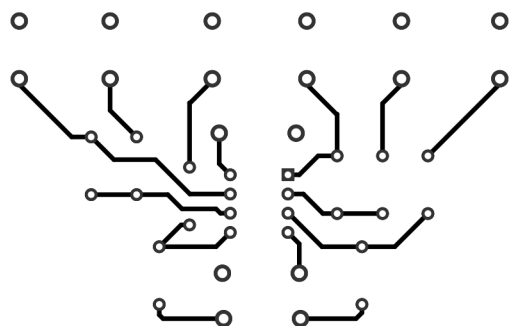Vcc+: +12V
Vcc-: −12V
Try to use low tolerances.

TL082 max voltage output is:
±[|supply| − 2]V
Using ±12V supply means ±10V out.

DIFF

DIFF