

1, 2

Lösungen Test Algebra

```
exor[a_, b_] := (a || b) && Not[a && b];  
Attributes[exor] = {Listable};
```

```
Clear[s]; s[a_, b_] := exor[a, b];  
Wtab[s, 2]
```

1	2	{expr}
0	0	0
0	1	1
1	0	1
1	1	0

```
scheff[a_, b_] := ~ (a && b);  
Attributes[scheff] = {Listable};
```

```
Clear[s]; s[x_, y_] :=  
  scheff[x, y];  
Wtab[s, 2]
```

1	2	{expr}
0	0	1
0	1	1
1	0	1
1	1	0

```
Clear[s]; s[x_, y_, z_] :=  
  exor[sub[x, sub[y, x && ~ z]], z];  
Wtab[s, 3]
```

①

1	2	3	{expr}
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	1

```
Clear[s]; s[a_, b_, c_] :=  
  scheff[sub[~ c, a || b], sub[a, ~ c]];  
Wtab[s, 3]
```

②

1	2	3	{expr}
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

```
Clear[s]; s[a_, b_, c_] :=  
  ~ a && ~ b && ~ c || a && ~ b && c || a && b && c;  
Wtab[s, 3]
```

1	2	3	{expr}
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

↖
 $\neg A \wedge \neg B \wedge \neg C \vee A \wedge \neg B \wedge C$
 $\vee A \wedge B \wedge C$