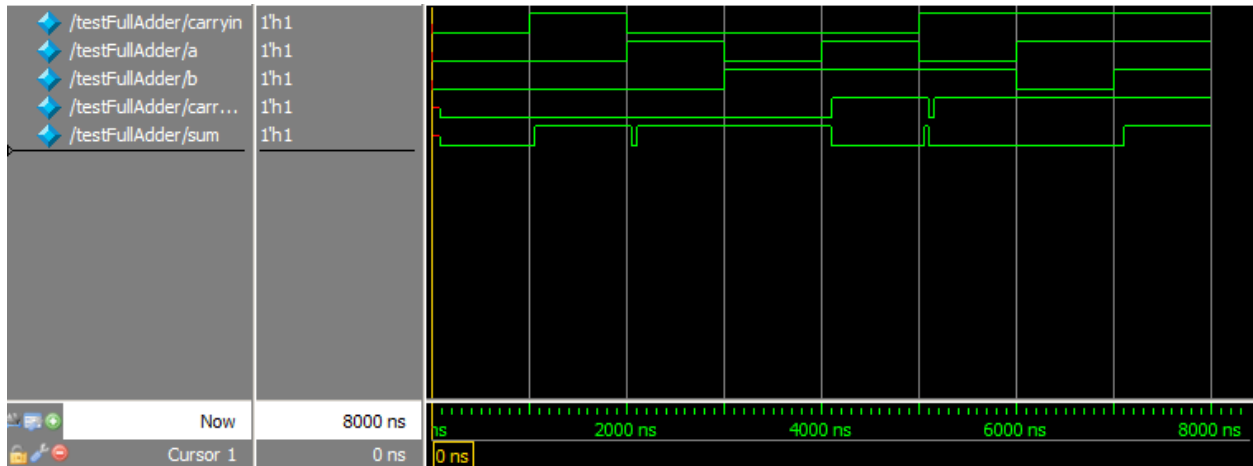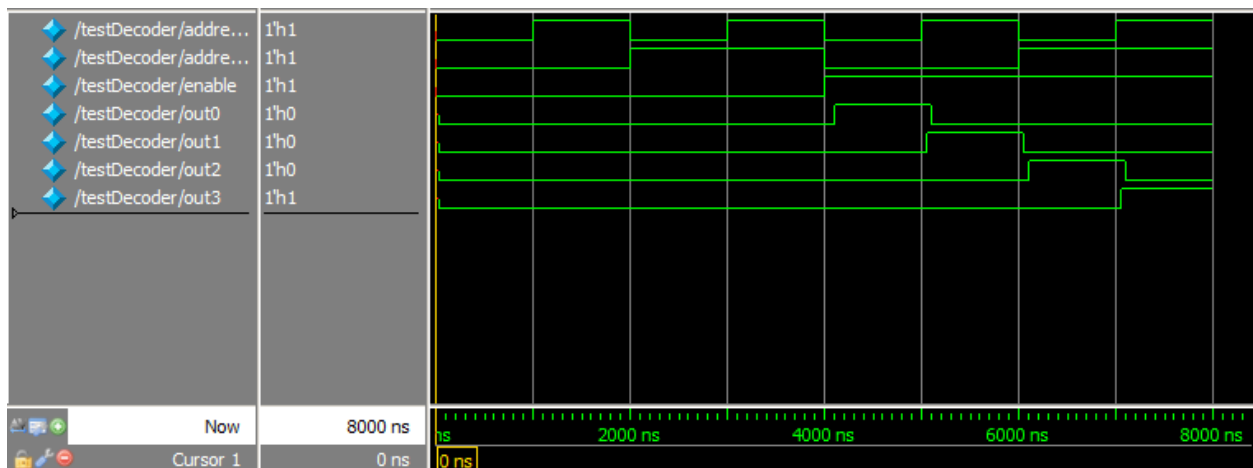Adder: Marie-Caroline Finke
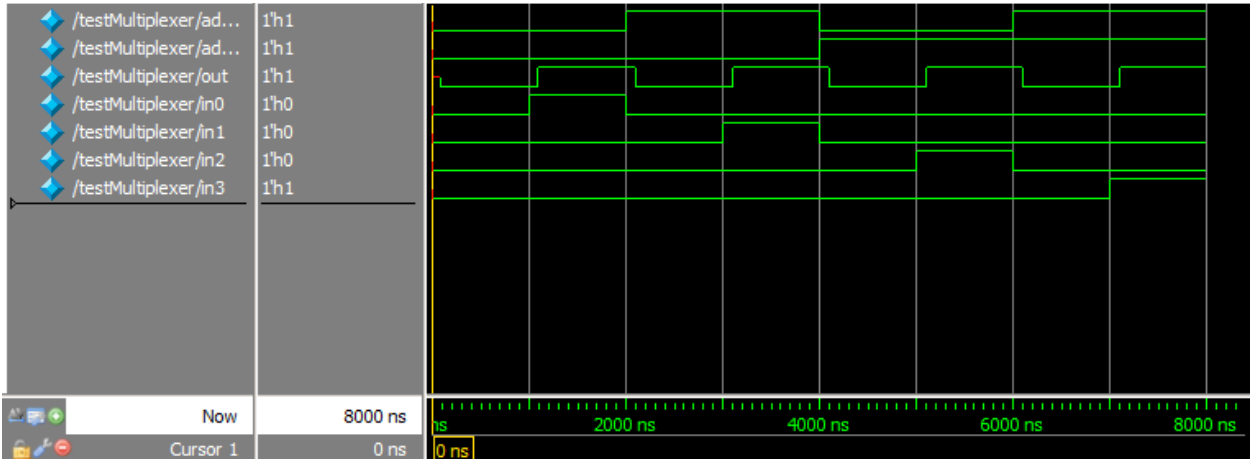


```
# Loading work.testFullAdder
# Loading work.structuralFullAdder
# Cin A B |Sum Cout| Expected Output
# 0  0 0 |  0   0  | All false
# 1  0 0 |  1   0  | Sum Only
# 0  1 0 |  1   0  | Sum Only
# 0  0 1 |  1   0  | Sum Only
# 0  1 1 |  0   1  | Cout Only
# 1  0 1 |  0   1  | Cout Only
# 1  1 0 |  0   1  | Cout Only
# 1  1 1 |  1   1  | All true
```

Decoder:

Multiplexer:

```
# Loading work.structuralDecoder
# En A0 A1| O0 O1 O2 O3 | Expected Output
# 0  0  0 |  0  0  0  0 | All false
# 0  1  0 |  0  0  0  0 | All false
# 0  0  1 |  0  0  0  0 | All false
# 0  1  1 |  0  0  0  0 | All false
# 1  0  0 |  1  0  0  0 | O0 Only
# 1  1  0 |  0  1  0  0 | O1 Only
# 1  0  1 |  0  0  1  0 | O2 Only
# 1  1  1 |  0  0  0  1 | O3 Only
```



```
# Loading work.structuralMultiplexer
# Add1 Add2 | In0 In1 In2 In3 | Out | Expected Output
#  0    0   |  0   X   X   X  |  0  | False
#  0    0   |  1   X   X   X  |  1  | True
#  1    0   |  X   0   X   X  |  0  | False
#  1    0   |  X   1   X   X  |  1  | True
#  0    1   |  X   X   0   X  |  0  | False
#  0    1   |  X   X   1   X  |  1  | True
#  1    1   |  X   X   X   0  |  0  | False
#  1    1   |  X   X   X   1  |  1  | True
```