

Rechenanlagen

Übungsblatt 5

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Aufgabe 5.1

```
ENTITY xnor IS
  PORT (x,y : IN bit; z : OUT bit)
END xnor
ARCHITECTURE behavior OF xnor IS
  CONSTANT tdhl : TIME := 25ps;
  CONSTANT tdlh : TIME := 45ps;
BEGIN
  PROCESS(x,y)
  BEGIN
    IF x=y
      THEN z <= '1' AFTER tdlh;
      ELSE z <= '0' AFTER tdhl;
    END IF
  END PROCESS
END behavior
```

Aufgabe 5.2

$$\frac{\overline{\overline{a \vee by}}}{\overline{((\overline{a \vee by}))}} \quad \frac{\overline{((a\overline{b} \vee \overline{y}))}}{\overline{(\overline{a} \text{ nor } \overline{b} \text{ nor } y)}}$$
$$\overline{a} \text{ nor } \overline{b} \text{ nor } y \text{ nor } \overline{a} \text{ nor } \overline{b} \text{ nor } y$$
$$(a \text{ nor } a) \text{ nor } ((b \text{ nor } y) \text{ nor } (b \text{ nor } y)) \text{ nor } ((a \text{ nor } a) \text{ nor } ((b \text{ nor } y) \text{ nor } (b \text{ nor } y)))$$