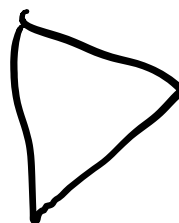
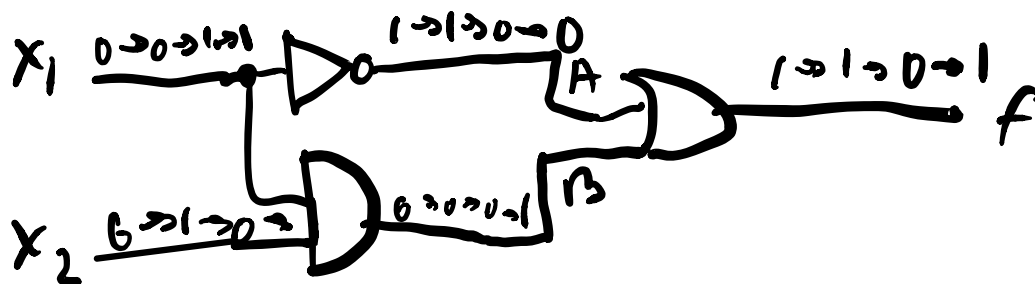


Not And 02

 And

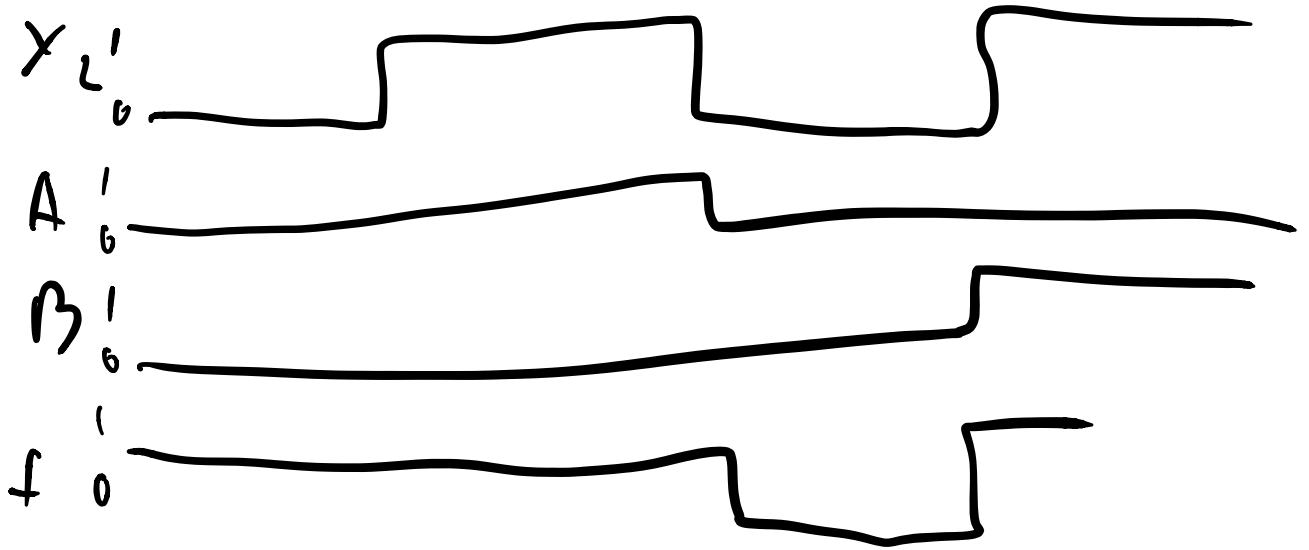
 OR

 Not



| x_1 | x_2 | $\neg x_1$ | $(x_1 \cdot x_2)$ | $\neg x_1 + (x_1 \cdot x_2)$ |
|-------|-------|------------|-------------------|------------------------------|
| 0 | 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 | 1 |
| 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 |





Functionally equivalent networks:
different transistors
same result

12 n

$$(x+y)(x+y)$$

2 n

$$30.625 / 35$$

8 n

4.35

5 l

12 n 6 n 12 l

-1

8 l

7 l

6 n

$$x y + y z + x z$$

6 n

8 b

12 u

12 a

12 b

12 a

5 b

6 b 5 b

6 a

6 a

12 a

7 a

12 a

5 b

6 a

23.8, 143

4.7

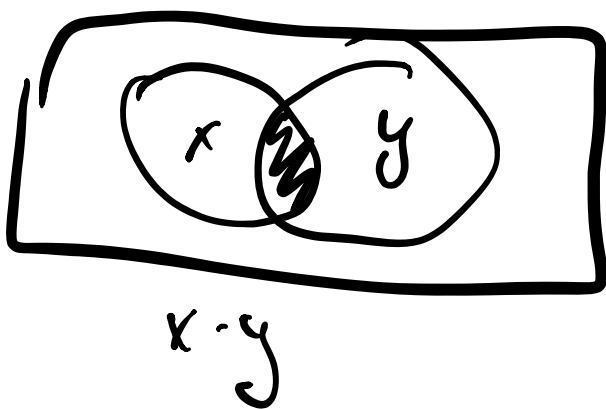
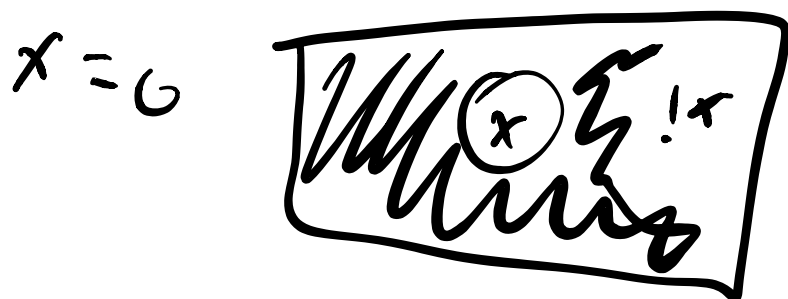
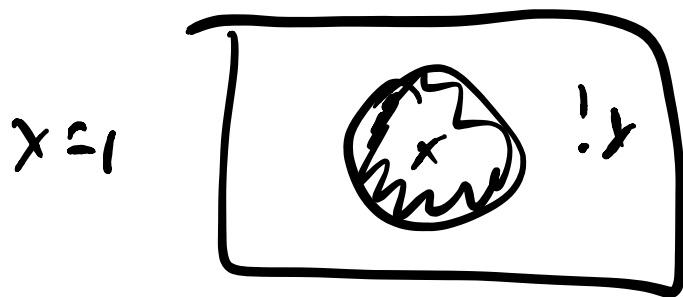
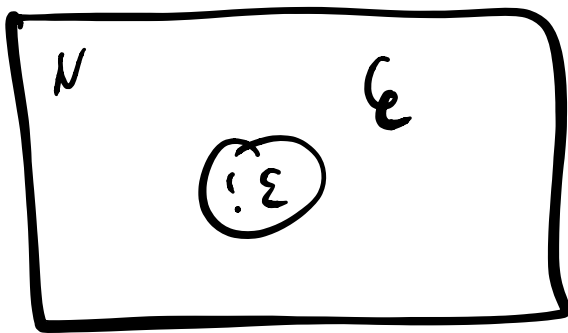
28.6

$(x-4)(x-2)$

$N: \{1-10\}$

$E = \{ \text{even } N \}$

$!E = \{ \text{odd } N \}$



$$(x \cdot y)^{12}$$