

$$\begin{aligned}
 559 \text{ Nr. 1)} & (2i-5) \cdot [(3i+4) - 2(i-4)] \\
 & (2i-5) \cdot (3i+4-2i+8) \\
 & (2i-5) \cdot (i+12) = 2i^2 + 24i - 5i - 60 \\
 & -62 + 19i \quad \Rightarrow \text{Argument } +\pi
 \end{aligned}$$

$$\begin{aligned}
 2) & 4(i-3)(i+3) - (i-2)(5+i) \quad \frac{-5i-2j - (-4+22i) - (3i+19)}{10} \\
 & 4(i^2-9) - (5i+i^2-10-2i) \\
 & -40 - (3i-11) = -29-3i \quad +\pi
 \end{aligned}$$

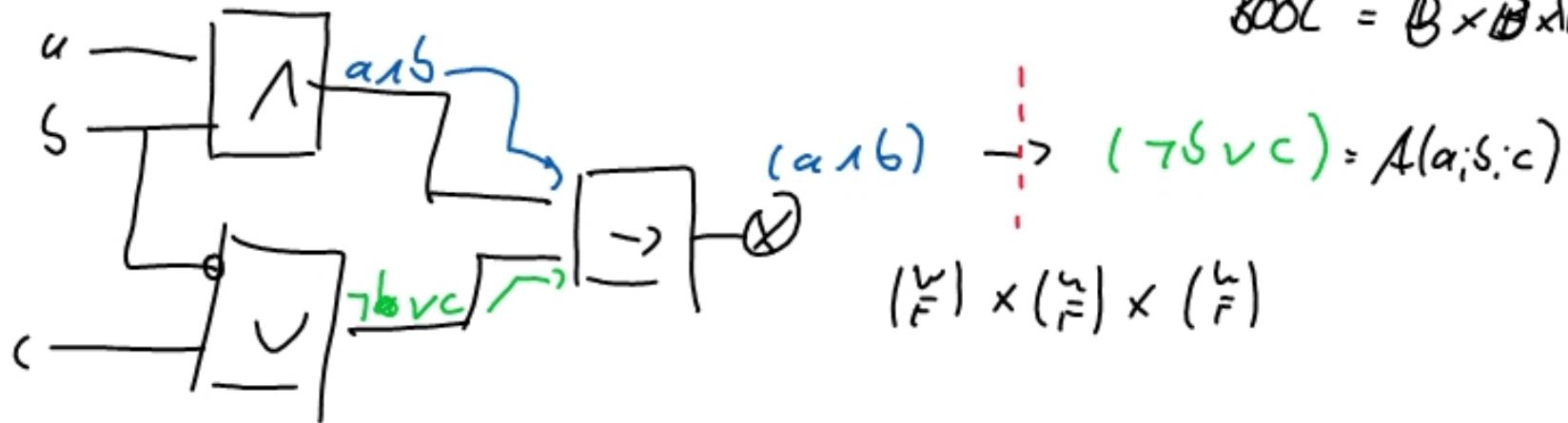
$$5) \quad \frac{3-2j}{1-1} \cdot \frac{j+1}{i+1} = \frac{3i+3-2i^2-2i}{i^2-1} = \frac{i+5}{-2} = \frac{-5i-2j}{10}$$

$$\frac{3i+4}{1-2i} \cdot \frac{1+2i}{1+2i} = \frac{3i+6i^2+4+8i}{1-4i^2} = \frac{-2+11i}{5} = \frac{-4+22i}{10}$$

$$\Rightarrow \frac{-5i-2j}{10} - \frac{-4+22i}{10} - \frac{3i+19}{10} \stackrel{*}{=} \frac{-30i-40}{10} = -4-3i$$

$$r = \sqrt{(-4)^2 + (-3)^2} = \sqrt{25} = 5 \quad \alpha = \arctan \frac{3}{4} + \pi$$

$$\text{BOOL}^3 = \mathbb{B} \times \mathbb{B} \times \mathbb{B}$$



| | | | | | | | | |
|------------|--------------------------------|---|---|---|---|---|---|---|
| a | w | w | w | w | f | f | f | f |
| b | w | w | f | f | w | w | f | f |
| c | w | f | w | f | w | f | w | f |
| \bar{I} | $a \wedge b$ | w | w | f | f | f | f | f |
| \bar{II} | $b \vee c$ | f | f | w | w | f | f | w |
| | $b \vee c$ | w | f | w | w | w | f | w |
| | $\bar{I} \rightarrow \bar{II}$ | w | f | w | w | w | w | w |

$$E[A(a; b; c)] = \text{BOOL}^3 \setminus \{wwf\}$$

$$A(a; b; c) = \neg(a \vee b) \leftrightarrow c \wedge \neg a$$

| | a | b | c | | | | | |
|------------|------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | w | w | w | w | \bar{w} | \bar{w} | \bar{w} | \bar{w} |
| | w | w | \bar{w} | \bar{w} | w | w | \bar{w} | \bar{w} |
| | w | \bar{w} | w | \bar{w} | w | \bar{w} | w | \bar{w} |
| | \bar{w} | \bar{w} | \bar{w} | \bar{w} | \bar{w} | \bar{w} | w | w |
| <u>I.</u> | $a \vee b$ | w | w | w | w | w | \bar{w} | \bar{w} |
| | $\neg(a \vee b)$ | \bar{w} | \bar{w} | \bar{w} | \bar{w} | \bar{w} | w | w |
| <u>II.</u> | $\neg a$ | \bar{w} | \bar{w} | \bar{w} | w | w | w | w |
| | $c \wedge \neg a$ | \bar{w} | \bar{w} | \bar{w} | w | \bar{w} | w | \bar{w} |
| | $\bar{I} \leftrightarrow \bar{II}$ | w | w | w | \bar{w} | w | w | \bar{w} |

$$E[A(a; b; c)] = \text{Bool}^3 \setminus \{(F w w), (F \bar{w} \bar{w})\}$$