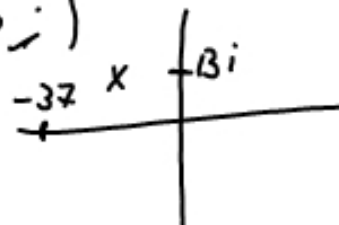


$$559 \text{ Nr. 2) } 4 \cdot (i-3) \cdot (3+i) - (i-2) \cdot (1+i)$$

$$16i - 48 - (5i - 1 - 10 - 2i)$$

$$16i - 48 - 3i + 11$$

$$z = -37 + 13i$$



$$\alpha = \arctan\left(\frac{13}{-37}\right) + \pi$$

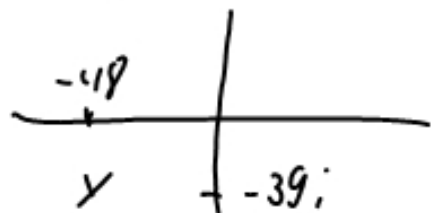
Mod 4 = 3 4) $15i^{11} - 3i(2i^7 + 2i^9) + 6i(7i - 5i^{15} + 3i^6)$

$$i^3 = -i$$

$$-15i - 3i(-2i + 2) + 6i(7i - 3)$$

$$-15i - 6 - 6i - 42 - 18i$$

$$z = -48 - 39i \quad \alpha = \arctan\left(\frac{39}{48}\right) + \pi$$

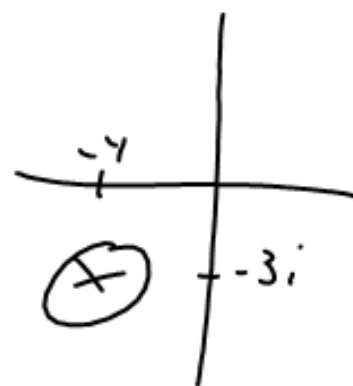


$$5) \frac{3-2i}{1-i} \cdot \frac{i+1}{i+1} = \frac{3i+3+2-2i}{-1-1} = \frac{5+i}{-2}$$

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

$$\frac{-25-5i - (-4+22i) - (3i+19)}{10}$$

$$\frac{-40-30i}{10} \Rightarrow z = -4-3i$$



$$r = \sqrt{4^2 + 3^2} = \sqrt{25} = 5$$

$$\alpha = \arctan\left(\frac{3}{4}\right) + \pi$$

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$$z^2 - (6i - 4) \cdot z = 12i + 9 \quad | -12i - 9$$

$$z^2 - \underbrace{(6i - 4)}_p \cdot z - \underbrace{12i - 9}_q = 0$$

$$z_{1,2} = \frac{6i - 4}{2} \pm \sqrt{\left(\frac{6i - 4}{2}\right)^2 - (-12i - 9)}$$

$$= 3i - 2 \pm \sqrt{\underbrace{(3i - 2)^2}_{-9 - 12i + 4} + \underbrace{12i + 9}_{-9 - 12i + 4}}$$

$$z_{1,2} = 3i - 2 \pm \sqrt{4}$$

$$z_1 = 3i$$

$$z_2 = 3i - 4$$

$$A(x, y, z) = \underbrace{\neg(x \vee y)} \xrightarrow{\dots} \underbrace{z \wedge \neg x} \leftrightarrow \underbrace{x \wedge y}$$

x	w	w	w	w	F	F	F	F
y	w	w	F	F	w	w	F	F
z	w	F	w	F	w	F	w	F
$x \vee y$	w	w	w	w	w	w	F	F
$\neg(x \vee y)$	F	F	F	F	F	F	w	w
$\neg x$	F	F	F	F	w	w	w	w
$z \wedge \neg x$	F	F	F	F	w	F	w	F
$(\neg(x \vee y) \rightarrow (z \wedge \neg x))$	w	w	w	w	w	w	w	F
$x \wedge y$	w	w	F	F	F	F	F	F
$\neg(x \wedge y)$	w	w	F	F	F	F	F	w

$$C[A] = \{(w, w, w), (w, w, F), (F, F, F)\}$$