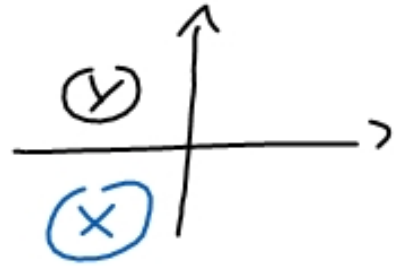


S 59 Nr. 2



$$4 \cdot (i - 3) \cdot (3 + i) - (i - 2) \cdot (5 + i)$$

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

$$16i - 48 - 3i + 11 \Rightarrow z = -37 + 13i$$

$$\alpha = \arctan \frac{13}{37} + \pi$$

$$4) 15i^{11} - 3i \cdot (2i^7 + 2i^8) + 6i \cdot (7i - 5i^{11} + 3i^6)$$

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

$$-15i - 6 - 6i - 42 - 18i = -48 - 39i$$

$$\alpha = \arctan \frac{39}{48} + \pi$$

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

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

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

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

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

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



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

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

$$z_{1/2} = \frac{6i-4}{2} \pm \sqrt{\left(\frac{6i-4}{2}\right)^2 - (-12i-9)}$$
$$= 3i-2 \pm \sqrt{(3i-2)^2 + 12i+9}$$

↓

$$\underline{-9-12i+4} \quad \underline{+12i+9}$$

$$z_1 = 3i-2+2 = 3i$$

$$z_2 = 3i-2-2 = 3i-4$$

$$A(x; y; z) = \overline{\neg(x \vee z)} \wedge y \leftrightarrow x \vee \neg y$$

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
$x \vee z$	w	w	w	w	w	f	w	f
$\neg(x \vee z)$	f	f	f	f	f	w	f	w
$\neg(x \vee z) \wedge y$	f	f	f	f	f	w	f	f
$\neg y$	f	f	w	w	f	f	w	w
$x \vee \neg y$	w	w	w	w	f	f	w	w
$\overline{\neg(x \vee z)} \leftrightarrow x \vee \neg y$	f	f	f	f	w	f	f	f

$$E[A] = \{(f, w, w)\}$$

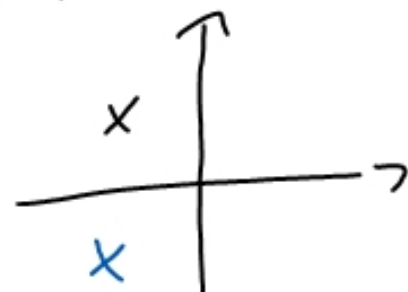
$$559 \text{ No. 1} \quad (2i-5) \cdot [(3i+4) - 2 \cdot (i-4)]$$

$$(2i-5) \cdot (3i+4 - 2i+8)$$

$$(2i-5) \cdot (i+12)$$

$$-2 + 24i - 5i - 60$$

$$-62 + 19i \quad / +\pi$$



$$3) \quad 4i^8 \cdot (4i - 2i^{11}) \cdot [(i^3 + 2i) \cdot (4i + 1)]$$

$$4 \cdot (4i + 2i) \cdot (i \cdot (4i + 1))$$

$$24i \cdot (-4 + i)$$

$$-24 - 96i$$

$$\alpha = \arctan\left(\frac{96}{24}\right) + \pi$$

$\underbrace{\hspace{2cm}}_4$

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

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

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

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

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

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

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

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

$$\sqrt{\frac{6i-4}{2}} = \frac{6i}{2} - \frac{4}{2}$$

3i - 2

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

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

$$z_{1/2} = 3i-2 \pm \sqrt{4} \longrightarrow z_1 = 3i$$

$$z_2 = 3i-4$$



nicht sel FVF

$$A(x; y; z) = \underbrace{\neg(x \wedge y \leftrightarrow z)}_{\text{red}} \vee \underbrace{((x \rightarrow z) \wedge y)}_{\text{blue}}$$

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

$$E[A] = \{(w, w, w); (w, w, f); (f, w, w); (f, w, f)\} \cup \{(w, f, w); (w, f, f); (f, f, w); (f, f, f)\}$$