

$$x = i$$

$$2x^2 \cdot (x - 4) + (3x - 2)(2x + 1)$$

$$2x^3 - 8x^2 + 6x^2 + 3x - 4x - 2$$

$$2x^3 - 2x^2 - x - 2$$

$$2 \cdot (\sqrt{-1})^3 - 2 \cdot (\sqrt{-1})^2 - \sqrt{-1} - 2$$

$$x = \sqrt{-1}$$

$$2 \cdot \sqrt{-1} \cdot (\sqrt{-1})^2 - 2 \cdot (-1) - \sqrt{-1} - 2$$

$$-2\sqrt{-1} + 2 - \sqrt{-1} - 2$$

$$-2x + 2 - x - 2$$

$$\sqrt{-1} = x$$

$$-3x$$

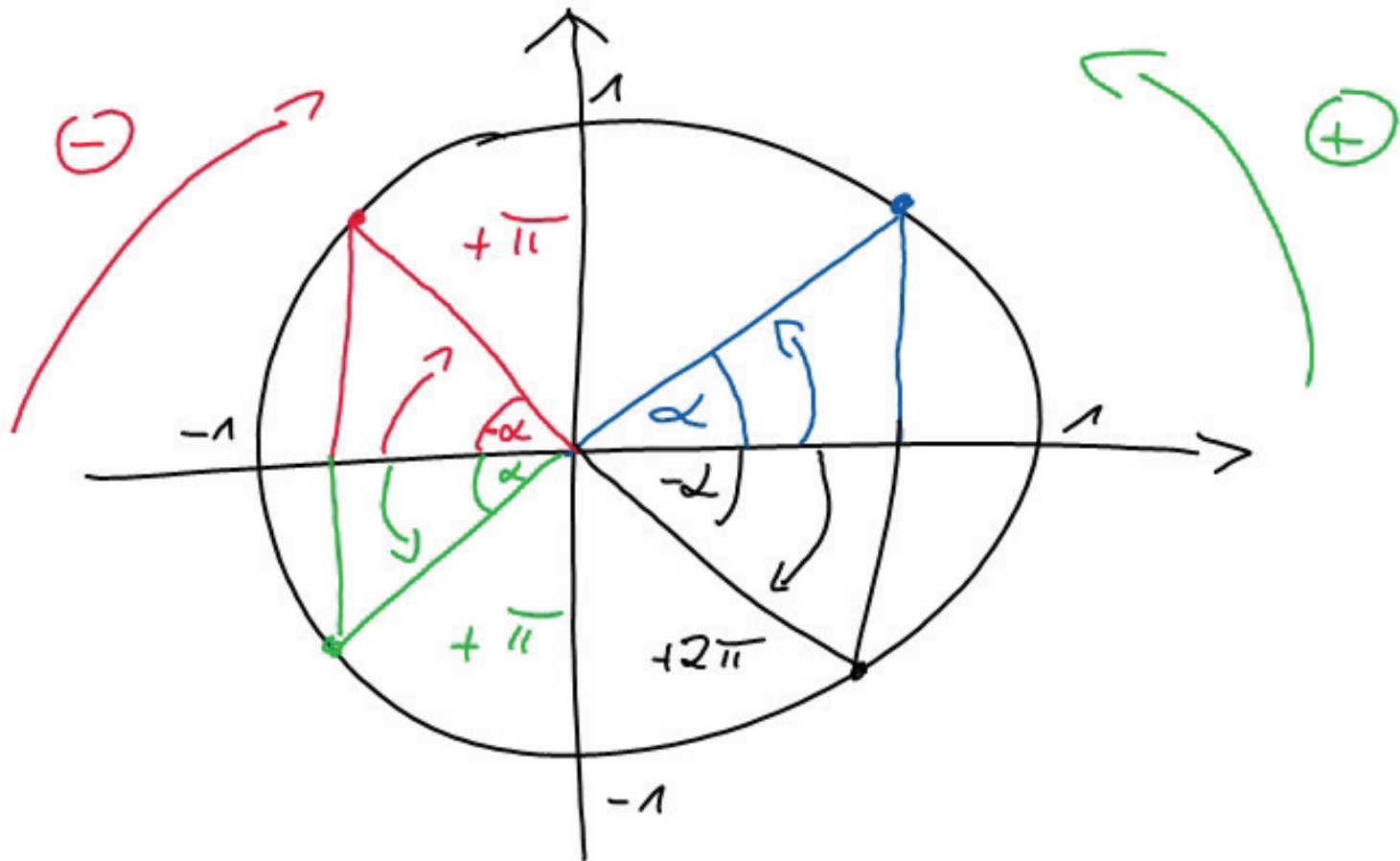
$$z = 3i^5 \cdot (2i^2 - 3) + (4i - 2i^4)(3i^2 - 1)$$

$$= 6i^7 - 9i^5 + 12i^3 - 4i - 6i^6 + 2i^4$$

$$= 6i^3 - 9i + 12i^3 - 4i - 6i^2 + 2i^4$$

$$-6i - 9i - 12i - 4i + 6 + 2$$

$$8 - 31i$$



$$\begin{aligned}
 1) \quad z &= 3i(4i-2) - (3i+4)(2i-5) + 3i \\
 &= 12i^2 - 6i - [6i^2 - 15i + 8i - 20] + 3i \\
 &= -12 - 6i + 6 + 15i - 8i + 20 + 3i \\
 &= 14 + 4i
 \end{aligned}$$

$$r = \sqrt{14^2 + 4^2} ; \alpha = \arctan\left(\frac{2}{7}\right)$$

$$\begin{aligned}
 2) \quad z &= 4i^2 \cdot (3i-2) + 2i(3+4i)(3-4i) \\
 &= 12i^3 - 8i^2 + 2i \cdot (9 - 16i^2) \\
 &= -12i + 8 + 18i - 32i^3 \\
 &= -12i + 8 + 18i + 32i \\
 &= 38i + 8
 \end{aligned}$$

$$\begin{aligned}
 r &= \sqrt{38^2 + 8^2} \\
 \alpha &= \arctan\left(\frac{38}{8}\right)
 \end{aligned}$$

$$\frac{3}{\sqrt{x}-5} \cdot \frac{\sqrt{x}+5}{\sqrt{x}+5} = \frac{3\sqrt{x}+15}{x-25}$$

$(a-b)$
 $(a+b)$
 a^2-b^2

$$(\sqrt{x}-5)^2 = x - 10\sqrt{x} + 25$$

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

$$\frac{3i-4}{1-\boxed{2i}} \cdot \frac{1+2i}{1+2i} = \frac{(3i-4) \cdot (1+2i)}{1^2 - (2i)^2}$$

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

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

$$\frac{3i-2}{3-i} \cdot \frac{3+i}{3+i} = \frac{(3i-2)(3+i)}{3^2 - i^2} = \frac{9i-3-6-2i}{10}$$

$$\frac{2i+5}{1+2i} \cdot \frac{1-2i}{1-2i} = \frac{(2i+5)(1-2i)}{1^2 - (2i)^2} = \frac{2i+4+5-10i}{5}$$

$$\frac{7i-9}{10} - \frac{-8i+9}{5} = \frac{7i-9+16i-18}{10}$$

$$\frac{-27}{10} + \frac{23}{10}i = -2,7 + 2,3i$$