

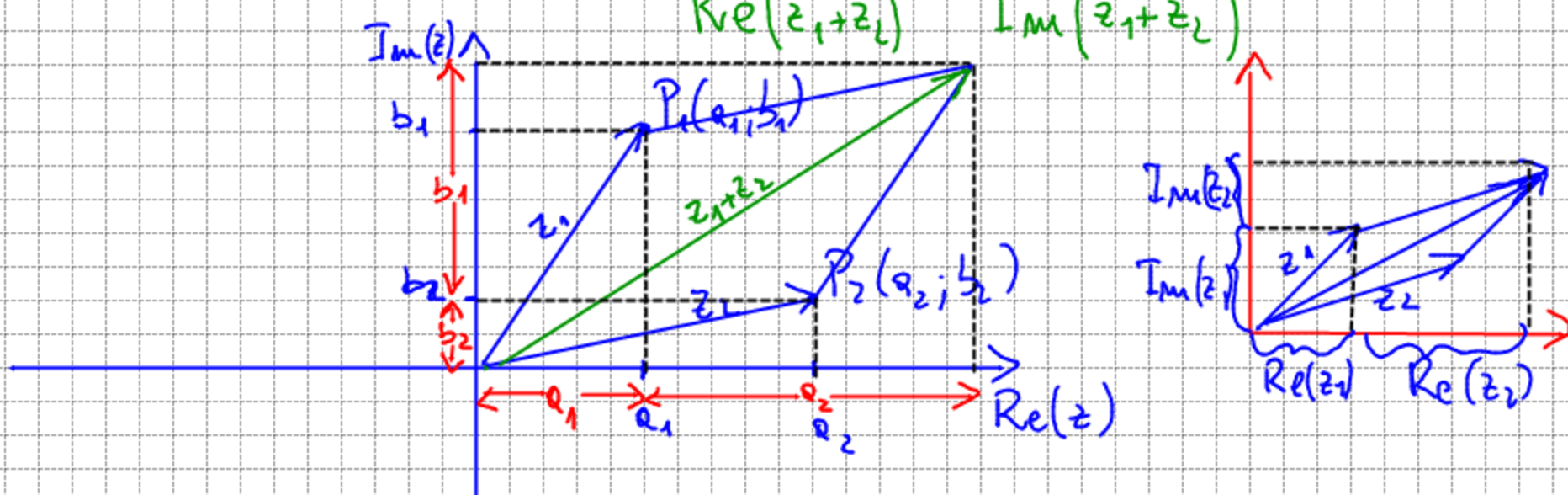
OPERAZIONI CON I NUMERI COMPLESSI

SOMMA

Dati due numeri complessi $z_1 = a_1 + ib_1$, $z_2 = a_2 + ib_2$

$$z_1 + z_2 = (a_1 + ib_1) + (a_2 + ib_2) = (a_1 + a_2) + i(b_1 + b_2)$$

$\text{Re}(z_1 + z_2)$ $\text{Im}(z_1 + z_2)$



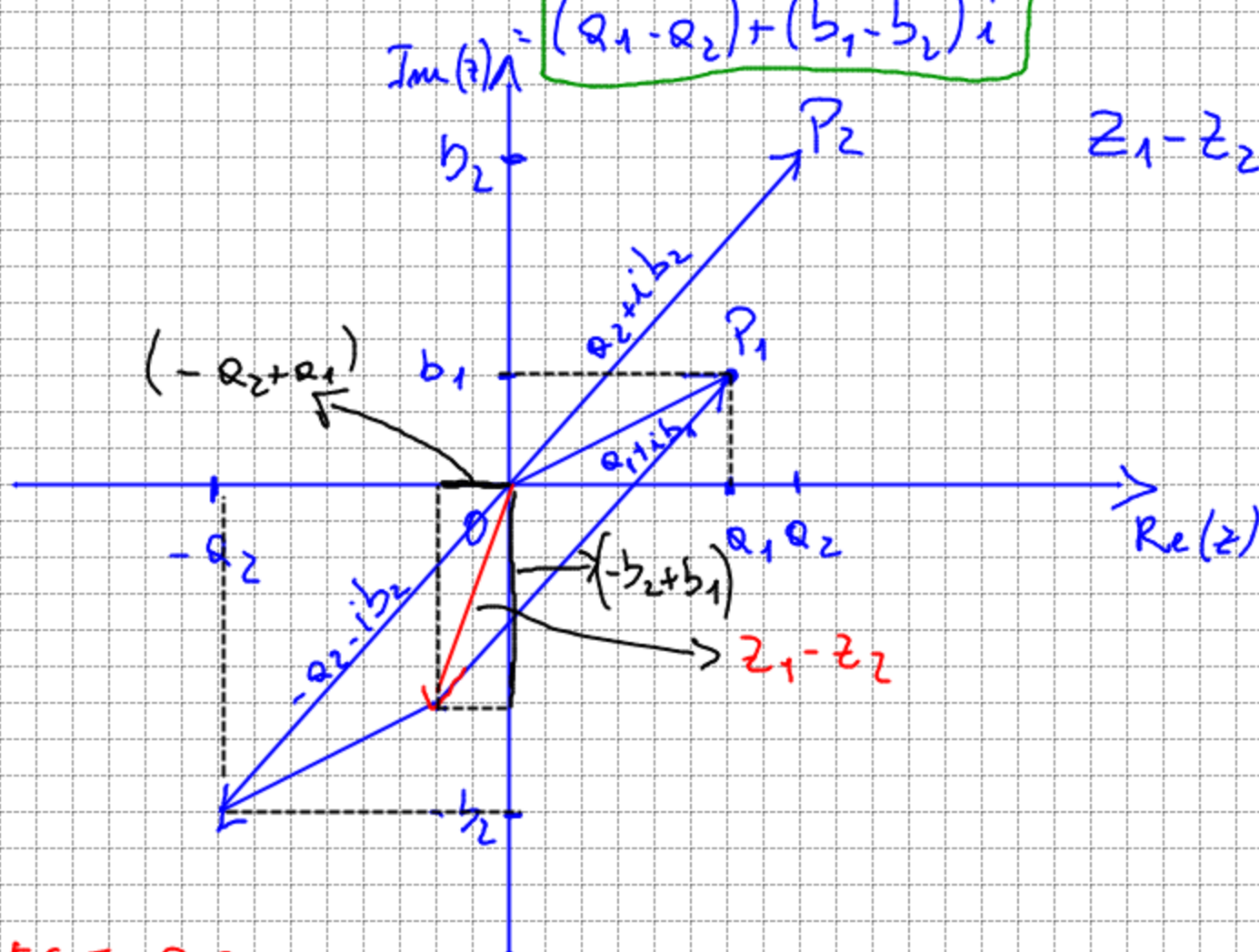
DIFFERENZA

Dati due numeri complessi $z_1 = a_1 + ib_1$, $z_2 = a_2 + ib_2$

$$z_1 - z_2 = (a_1 + ib_1) - (a_2 + ib_2) = a_1 + ib_1 + (-a_2 - ib_2)$$
$$= (a_1 - a_2) + i(b_1 - b_2) =$$

$$(a_1 - a_2) + (b_1 - b_2)i$$

$$z_1 - z_2 = z_1 + (-z_2)$$
$$\downarrow$$
$$-a_2 - ib_2$$



ESEMPIO

$$z_1 = 2 + 3i; \quad z_2 = 4 - 2i$$

$$z_1 + z_2 = 6 + 1i$$

$$z_1 - z_2 = -2 + 5i$$

$$z_2 - z_1 = 2 - 5i$$

$$\overline{z_1} = 2 - 3i$$

$$\overline{z_2} = 4 + 2i$$

$$z_1 + \overline{z_1} = 4 \quad *$$

$$z_2 + \overline{z_2} = 8 \quad *$$

$$z_1 + \overline{z_2} = 6 + 5i$$

$$z_2 + \overline{z_1} = 6 - 5i$$

$$\overline{\overline{z_1}} = z_1 = 2 + 3i$$

$$\overline{z_1 + \overline{z_2}} = 6 - i$$

$$z_1 + z_2 = ?$$

$$z_1 - z_2 = ?$$

$$\overline{z_1} = ?$$

$$\overline{z_2} = ?$$

$$z_1 + \overline{z_1} = ?$$

$$z_2 + \overline{z_2} = ?$$

$$\overline{z_1 + \overline{z_2}} = ?$$

$$\overline{\overline{z_1}} = ?$$

$$z_2 - z_1 = ?$$

Disegnarli!