The first equation should be labelled with a one

$$t'^2 - x'^2 - y'^2 - z'^2 = t^2 - x^2 - y^2 - z^2. \tag{1}$$

Now the second equation has letters in the equation references and should be labelled with a 2

$$t' - z' = (t - z)\alpha\bar{\alpha} + (x + iy)\alpha\bar{\beta} + (x - iy)\beta\bar{alpha} + (t + z)\beta\bar{\beta}, \tag{1a}$$
$$x' + iy' = (t - z)\alpha\bar{\gamma} + (x + iy)\alpha\bar{\delta} + (x - iy)\beta\bar{\gamma} + (t + z)\beta\bar{\delta}, \tag{1b}$$
$$t' + z' = (t - z)\gamma\bar{\gamma} + (x + iy)\gamma\bar{\delta} + (x - iy)\delta\bar{\gamma} + (t + z)\delta\bar{\delta}. \tag{1c}$$

Now the third equation also has letters in the equation reference and should be labelled with a 3

$$\alpha\bar{\beta} + \bar{\alpha}\beta = 0, \tag{1a}$$
$$i(\alpha\bar{\beta} - \bar{\alpha}\beta) = 0, \tag{1b}$$
$$-\alpha\bar{\alpha} + \beta\bar{\beta} = -1, \tag{1c}$$
$$\alpha\bar{\alpha} + \beta\bar{\beta} = 1. \tag{1d}$$

Now reference the first equation, (1).
Now reference the second equations (1a) and (1b) and (1c).
Now reference the third equations (1a) and (1b) and (1c).