Zad. 3.

$x \to \frac{d}{z}$, $y \to \frac{d}{z} y$, $z \to z$

$d = -1$, $A = (6, 0, -4)$, $B = (6, 0, 0)$, $A = A'$, $B = B'$

a) $C = \left(\frac{12}{5}, 0, -\frac{12}{5}\right)$, $D = \left(5, 0, -\frac{2}{3}\right)$

$\frac{12}{5} \to \frac{-1}{-\frac{12}{5}} = \frac{5}{12}$ $\quad 0 \to \frac{-1}{-\frac{12}{5}} \cdot 0 = 0$ $\quad -\frac{12}{5} \to -\frac{12}{5}$

$\Rightarrow C'\left(\frac{5}{12}, 0, -\frac{12}{5}\right)$

$D = \left(5, 0, -\frac{2}{3}\right)$

$5 \to \frac{-1}{-\frac{2}{5}} = \frac{3}{2}$ $\quad 0 \to \frac{-1}{-\frac{2}{3}} \cdot 0 = 0$ $\quad -\frac{2}{3} \to -\frac{2}{3}$

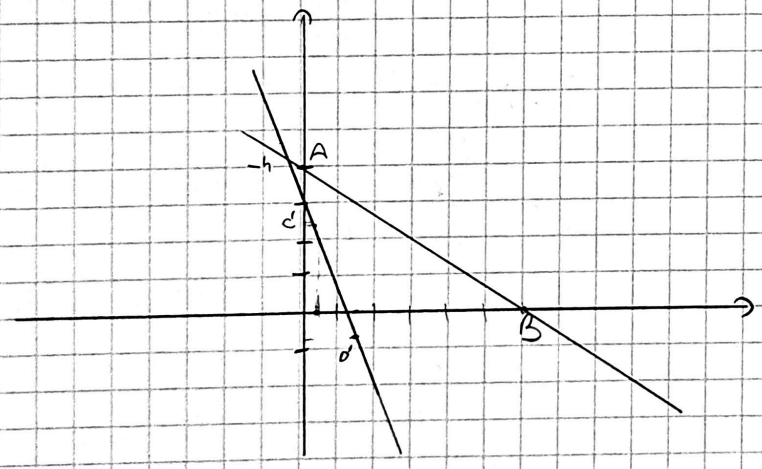
$\Rightarrow D'\left(\frac{3}{2}, 0, -\frac{2}{3}\right)$

$\overrightarrow{AB} = (6, 0, 4)$ $\quad \overrightarrow{C'D'} = \left(\frac{13}{12}, 0, \frac{26}{15}\right)$

paralelní: $(6, 0, 4) = \left(\frac{13}{12}\alpha, 0, \frac{26}{15}\alpha\right)$?

$6 = \frac{13}{12}\alpha \Rightarrow \alpha = \frac{72}{13}$

$4 = \frac{26}{15}\alpha \Rightarrow \alpha = \frac{30}{13}$ $\Rightarrow$ nisou paralelní



b) $x_T = \frac{1}{2}(0+6) = 3$

$y_T = \frac{1}{2}(0+0) = 0$

$z_T = \frac{1}{2}(-4+0) = -2$

$T = (3, 0, -2)$

$x_{T'} = \frac{d}{z_A + z_B}(x_A + x_O) = \frac{-1}{-4} \cdot 6 = \frac{3}{2}$

$y_{T'} = 0$

$z_{T'} = \frac{1}{2}(-4) = -2$

$T' = \left(\frac{3}{2}, 0, -2\right)$