1. Θ’= 0.75 rad = 45o because Δθ = ( vL – vR)/d \*t

x’ = sqrt(2)/4

y’ = (sqrt(2) -2)/4

2.)

a.)

$$=\left[\begin{matrix}-1&0&0\\0&0&-1\\0&-1&0\end{matrix}\right] =\left[\begin{matrix}-\frac{1}{2}sqrt(3)&-1/2&0\\0&0&1\\-1/2&\frac{1}{2}sqrt(3)&0\end{matrix}\right]$$

b.)

AOb = $\left[\begin{matrix}0\\4\\2\end{matrix}\right]$ BOc == $\left[\begin{matrix}3\\0\\0\end{matrix}\right]$ .

c.) Follow equation (3.13) on slide 10 of “Coordinate Systems and Transformations.”