1. Graph the function $y = 3^{x-2} + 1$ by shifting $y = 3^x$. Find all its asymptotes and the point at which this function intercepts y-axis.

2. Evaluate $\tan(\operatorname{Arcsec}(\frac{4}{3}))$. hint: Draw a right triangle and find the requested trigonometric function. Pay extra attention to the trigonometric quadrant this angle belongs!

3. Find the inverse of the following function by using complete square method!Find its domain and range.

$$y = x^2 - 6x \tag{1}$$

hint: since y is not one to one therefore y^{-1} is not defined. You will end up with two relations for the inverse function. Pick one and find its domain and range accordingly.