

1. Graph the function  $y = \log(x - 2) + 1$  by shifting the function  $y = \log(x)$ . Find all its asymptotes and the point at which this function intercepts x-axis.

2. Evaluate  $\sec(\arctan(\frac{-3}{4}))$ .

hint: Draw a right triangle and find the requested trigonometric function. Pay extra attention to the trigonometric quadrant this angle belongs!

3. Find  $x$  for the following equation.

$$\log_3(x - 6) = 2\log_3(x) \quad (1)$$

Hint: There are two solutions. One of them is not acceptable. Explain why!