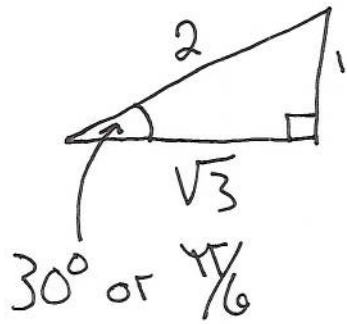


① Find the exact solution of  $\sin(\arctan(\frac{1}{\sqrt{3}}))$



$$\sin(\arctan(\frac{1}{\sqrt{3}})) = \sin(\frac{\pi}{6}) = \frac{1}{2}$$

② Solve the following equation for  $x$   
 $\ln(\ln(x-3)) = 5$

Solution:

$$\ln(\ln(x-3)) = 5$$

$$e^{\ln(\ln(x-3))} = e^5$$

$$\ln(x-3) = e^5$$

$$e^{\ln(x-3)} = e^{e^5}$$

$$x-3 = e^{e^5}$$

$$x = e^{e^5} + 3$$