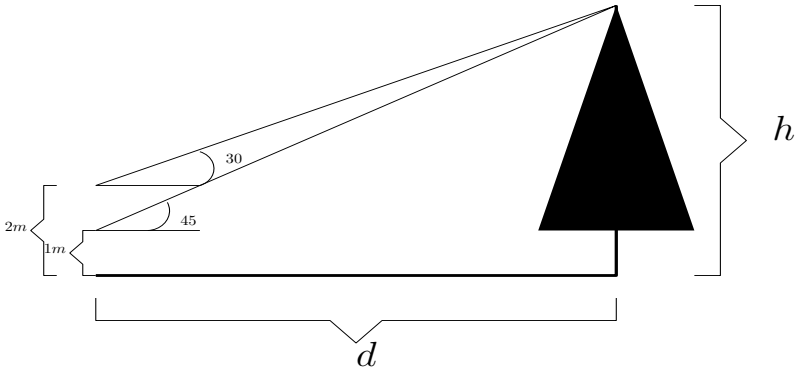
MA1E01: Tutorial week 3

REMEMBER TO HAND BEFORE THE TUTORIAL STARTS

- Inverse functions.
- Elementary functions.

Problem 1 *A person holds a device 2m high above the ground from a distance of d meters. The angle of elevation when aiming at the top of a tree is 30 degrees. If the device is positioned 1m above the ground, the angle of elevation is 45 degrees. What is the height of the tree? (**NOTE:** $\tan 45 = 1; \tan 30 = 1/\sqrt{3}$).*



Problem 2 *Find the inverse of the following functions when they exists*

1. $f(x) = \sqrt[3]{x^3 + 5}$
2. $f(x) = \sqrt{x - 1}$
3. $f(x) = \sqrt{x^2 + 1}$

Problem 3 *Find the inverse of the following functions when they exists*

1. $f(x) = \sqrt[5]{x^3 - 1}$
2. $f(x) = \sqrt{x^3 - 27} - 1$
3. $f(x) = \sqrt{x^2 - 2x + 1}$