

ME 1020 Engineering Programming with MATLAB

Problem 3.5:

5. For several values of x , use MATLAB to confirm that $\cosh^{-1} x = \ln(x + \sqrt{x^2 - 1})$, $x \geq 1$

```
% Problem 3.5
clear
clc
disp('Problem 3.5: Scott Thomas')

x=1:1:5

acosh_x = acosh(x)

ln_fnc = log(x+sqrt(x.^2-1))
```

Problem 3.5: Scott Thomas

x =

1 2 3 4 5

acosh_x =

0 1.3170 1.7627 2.0634 2.2924

ln_fnc =

0 1.3170 1.7627 2.0634 2.2924