

University of Lethbridge
Department of Mathematics and Computer Science
MATH 1565 - Tutorial #1

Print your name and student number clearly in the space above.

Complete the problems on the back of this page to the best of your ability. If there is a problem you especially desire feedback on, please indicate this.

Tutorial worksheets are graded for completeness, not correctness. Mistakes are not penalized as long as you've made progress towards the solution.

1. **Using the definition** of $\sinh(x)$, show that

$$\sinh(x + y) = \sinh(x) \cosh(y) + \cosh(x) \sinh(y).$$

2. Show that $\sin(\tan^{-1}(x)) = \frac{x}{\sqrt{1 + x^2}}$.