

# 1 4.3: Review of Logarithmic Functions

Definition and Properties of Logarithms

Graphs of Logarithmic Functions:

Change of Base Formula

**Examples:**

Compute  $\log_5 10 + \log_5 20 - 3 \log_5 2$ .

The formula to compute the amount of money  $A$  in an account earning  $100r\%$  interest compounded  $m$  times per year after  $t$  years is  $A = P \left(1 + \frac{r}{m}\right)^{mt}$ . If \$10,000 are invested in a CD earning 4% per year compounded monthly, when will the account have \$15,000?

Solve for  $x$ :  $\log(x + 2) + \log(x + 11) = 1$

Compute  $\lim_{x \rightarrow \infty} \ln(e^x + e^{-x}) - \ln(2e^x + e^{-x})$