LOG FORM: $\log_b Q = P$

BASE

EXP FORM: $b^P = Q$

SPECIAL BASES

1. $\log X$: $b = 10$ "COMMON LOG"
2. $\ln X$: $b = e$ "NATURAL LOG"

1. $\ln_e 7 = 1.9459\ldots$

$e^{1.9459\ldots} = 7$

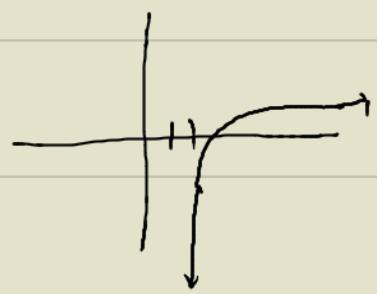
2. $e^3 = 20.0855\ldots$

P, b, Q

$\log_e 20.0855\ldots = 3$

$\ln 20.0855\ldots = 3$

3. $f(x) = \ln(x-2)$



4. $f(x) = 3 - \ln(x+1)$

5. $\ln_e e^{3x+5}$

$= 3x+5$

FORMULA

$\log_b b^P = P$

6. $e^{\ln_e(4x)}$

$= 4x$

FORMULA

$b^{\log_b Q} = Q$