28) $Pe^{rt} = A$

$\$2500e^{.035(8)} = A$

$A = \$3307.82$

26) Write a power fcn that passes through (3,8) and (6,15)

$y = ax^b$

$8 = a \cdot 3^b$

$\frac{8}{3^b} = a$

$15 = \frac{8}{3^b} \cdot 6^b$

$\frac{15}{8} = 2^b$

$\log_2\left(\frac{15}{8}\right) = b$

$.907 \approx b$

$\frac{8}{3^{.907}} \approx 2.95$

$\boxed{y = 2.95x^{.907}}$

24) $\log_4 x + \log_4(x+6) = 2$

$\log_4 x^2 + 6x = 2$

$x^2 + 6x = 4^2$

$x^2 + 6x - 16 = 0$

$(x+8)(x-2)$ $x = -8, 2$

$\log_4(-8)$ ≠ we can't take the log of a negative number

$\boxed{x = 2}$

22) $7^{2x} = 30$

$\log_7 30 = 2x$

$\frac{1}{2}\left(\frac{\log 30}{\log 7}\right) = x$

$\boxed{x \approx .874}$

20) $\log_a 23 = \frac{\log 23}{\log a}$

$\boxed{\approx 1.75}$

18) $\log 5 + \log x - 2\log 3 =$

$\log 5x - \log 3^2 =$

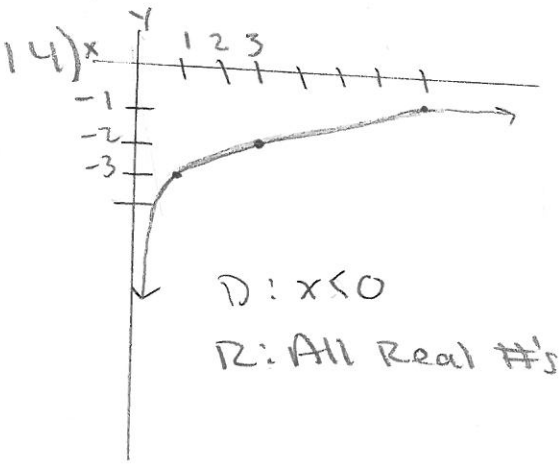
$\boxed{\log \frac{5x}{9}}$

16) $2\ln 7 - 3\ln 4 =$

$\ln 7^2 - \ln 4^3 =$

$\boxed{\ln \frac{49}{64}}$

14)



D: $x < 0$

R: All Real #'s

12) $\log_a 1 = x$

$a^x = 1$, $\boxed{x = 0}$

10) $\log_5 25 = \log_5 5^2 = \boxed{2}$

MATHEMATICS