9. $y = 2\ln(x-3)$ Domain: $x > 3$ $\{x \mid x > 3\}$

to find x-int set $y=0$ V.A. $x = 3$

$0 = 2\ln(x-3)$

$0 = \ln(x-3)$

$e^0 = e^{\ln(x-3)}$

$1 = x-3$ $x = 4$ when $y = 0$

$0 = 2\ln(x-3)$

$e^0 = e^{2\ln(x-3)}$

$e^0 = e^{\ln(x-3)^2}$

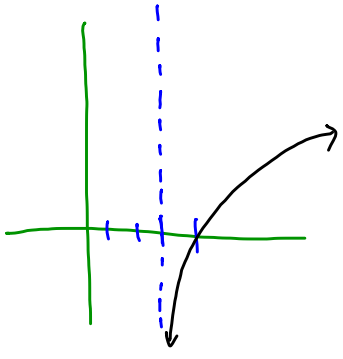
$1 = e$

$1 = (x-3)^2$

$\pm 1 = x-3$

$3-1, 3+1 = x$

~~2~~, $4 = x$



4. $y = 10^x$ $\hat{y} = e^x$ $\log x$, $\ln x$

$\log_{10} x$, $\log_e x$ $e \approx 2.718$