

Math 114
Midterm 3 Review

[1]	[a]	-7	[b]	$\frac{3}{5}$	[c]	-1	
[2]	[a]	all real numbers	[b]	$\left\{x \neq \frac{3}{2}\right\}$	[c]	$\{x \leq 8\}$	[d] all real numbers
	[e]	$\{x > 0\}$					
[3]	[a]	$\{y \neq -4\}$	[b]	$\{y \leq 7\}$	[c]	$\{y > 0\}$	[d] all real numbers
[4]	[a]	$\frac{1}{2}$	[b]	-2	[c]	3	[d] UNDEFINED
	[e]	UNDEFINED	[f]	0	[g]	6	[h] 4
	[i]	6	[j]	-3	[k]	7	[l] UNDEFINED
	[m]	UNDEFINED	[n]	5			
[6]	[a]	-2	[b]	3	[c]	11	[d] 5
[10]	[a]	$4 - a - a^2$	[b]	$2a^2 + 17a + 34$			
[11]	[a]	yes	[b]	no	[c]	yes	
[12]	[a]	$f^{-1}(x) = \frac{5-x}{2}$	[b]	$f^{-1}(x) = 3 - (4-x)^2$			
[13]	[a]	$\log 40$	[b]	$\log 7$	[c]	$\log 32$	[d] $\log x^3 y^2$
	[e]	$\log \frac{x^2 z}{y}$	[f]	$\log \frac{z}{y^2 x}$	[g]	$\log \frac{y^2 z^3}{x}$	[h] $\log z^4 x y^3$
[14]	[a]	$\log 7 + \log 11$	[b]	$\log 13 - \log 5$	[c]	$8 \log 3$	[d] $4 \log r + \log s$
	[e]	$5 \log a - 2 \log b$	[f]	$\log m - 2 \log n - 3 \log p$			
	[g]	$2 \log x - \frac{1}{2} \log y - \frac{1}{2} \log z$					
[15]	[a]	0.5646	[b]	12.2571			
[16]	[a]	25.3 bacteria	[b]	4.0 units of time			
[17]	[a]	398107 microns	[b]	7.748			