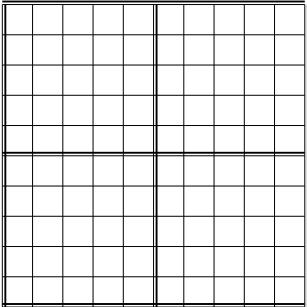


MATH 111 EXAM 3, Fall 2015

All work by hand .		Name:	Score	
1.	a) Find: $\log_2 \sqrt{1/8}$ .  Ans: _____  c) Find: $\log_{1/3}(27)$ .  Ans: _____	b) Simplify: $3e^{-3 \ln x}$ .  Ans: _____  d) Simplify: $5^{3 \log_5 x}$ .  Ans: _____	1	
			2	
			3	
			4	
			5	
			6	
			7	
2.	a) Find $f^{-1}(x)$ given $f(x) = x^3 - 7$ .    Ans: _____	b) Find $f^{-1}(x)$ given $f(x) = x/(x - 5)$ .    Ans: _____	8	
			9	
			10	
			Tot	
3.	Write as a single logarithm and simplify a) $\log \sqrt{x} - 3 \log x$ .   Ans: _____	b) $\ln(x^2 - 4) - \ln(x - 2)$   Ans: _____		
4.	a) Find $\log_2(-x)$ for $x = -4, -2, -1, -1/2$ .   Ans: _____	b) Graph: $y = \log_2(-x)$ . (Label at least 3 points.)  		
5.	a) Solve: $4^{2-x} = 8^{x+1}$ .   Ans: _____	b) Solve: $3 \log_x 8 = -9$ .   Ans: _____		
Extra Space				

Pencil and paper test	Name:
<p>6. Solve exactly:</p> <p>a) <math>8e^{-5x} = 4</math>.</p> <p style="text-align: right;">Ans: _____.</p>	<p>b) <math>\frac{4}{1 - e^{-3x}} = 20</math>.</p> <p style="text-align: right;">Ans: _____.</p>
<p>7. Solve: <math>\log_2 x + \log_2(4x + 7) = 1</math>.</p> <p style="text-align: right;">Ans: _____.</p>	
<p>8. Solve for x:</p> <p><math>3^{2x-1} = 6^{x+4}</math></p> <p style="text-align: right;">Ans: _____.</p>	<p style="text-align: right;">Ans: _____.</p>
<p>9. Solve the inequality</p> <p><math>\frac{2x - 1}{x + 2} \leq 3</math></p> <p style="text-align: right;">Ans: _____.</p>	<p style="text-align: right;">Ans: _____.</p>
<p>10. let <math>\frac{3x^2 + 1}{x - 2}</math>. Find</p> <p>a) The intercepts and vertical asymptote.</p> <p style="text-align: right;">Ans: _____.</p>	<p>b) The oblique asymptote.</p> <p style="text-align: right;">Ans: _____.</p>
<p>Extra Space</p>	