

Math 14 – Review for final (sections 013 through 029)		
1	Solve for x: $x(2x - 5) = 3$	$-\frac{1}{2}, 3$
2	$\frac{3+2i}{1+i}$	$\frac{5-i}{2}$
3	$\sqrt{x+1} + x = 1$	0
4	$(x+5)^{\frac{2}{3}} = 9$	22, -32
5	$(2x+1)^2 + 2(2x+1) - 15 = 0$	1, -3
6	$x^{\frac{2}{3}} - 6x^{\frac{1}{3}} + 8 = 0$	64, 8
7	Solve for x: $x^3 + 2x^2 - 9x - 18 = 0$	3, -3, -2
8	Solve for x: $x^3 = 4x$	0, 2, -2
9	Solve for x: $-2 < -2x + 4 < 10$	$-3 < x < 3$
10	Solve for x: $5x - 3 > 7$ or $-3x + 5 < -25$	$x > 2$
11	$(x-2)^2(x+3) > 0$	$(-3, 2) \cup (2, \infty)$
12	$\frac{x-3}{x+2} \geq 0$	$x < -2, x \geq 3$
13	$ 2x+1 = 3x-2 $	$3, \frac{1}{5}$
14	$ x = -2x + 3$	$x = 1$
15	$3 x+5 - 21 = 0$	2, -12
16	$ 2x-1 > 7$	$x < -3, x > 4$
17	$ 2x+3 < 5$	$(-4, 1)$
18	Find the domain: A) $y = \frac{x-5}{x^2-5x+6}$ B) $y = \frac{x-3}{\sqrt{2-5x}}$	A) $x \neq 2, -3$ B) $x < 2/5$
19	Find the difference quotient for $f(x) = x^2 - x$, and simplify: $\frac{f(3+h)-f(3)}{h}$	$5 + h$
20	For $f(x) = \frac{3}{x-4}$, find $f^{-1}(x)$	$f^{-1}(x) = \frac{3+4x}{x}$
21	For $f(x) = 3x^2 - 5x$, and $g(x) = x - 2$; form $f(g(x))$ and simplify.	$3x^2 - 17x + 22$
22	Find the average rate of change of $f(x) = 2x^2 + 3$ from $x = 2$ to $x = 5$.	14