Math 1050 A5.2 Systems 3D	Name
1. Solve the system:	2. Solve the system:
x-y-z=4	x+y+z=4
2y+z=-1	x+3y+3z=10
-x+y-2z=5	2x+y-z=3
3. Solve the system: 2x+4y-z=2 x+2y-3z=-4 3x-y+z=1	4. Solve the system: -x+2y+5z = 4 $x - 2z = 0$ $4x-2y-11z = 2$
5. Solve the system:	6. Solve the system:
x+y-z=0	2x + 4y - z = 3
x+2y-3z=-3	x + 2y + 4z = 6
2x+3y-4z=-3	x + 2y - 2z = 0

7. A gas station sells regular gas for \$2.80 per gallon, and premium gas for \$3.20 per gallon. At the end of a business day 420 gallons of gas were sold, and receipts totaled \$1200. How many gallons of each type of gas were sold?	8. A boat on a river travels downstream between 2 points, 20 mi apart, in one hour. The return trip against the current takes $2\frac{1}{2}$ hours. What is the boat speed, and how fast does the current in the river flow?
9. A chemist has two large containers of sulfuric acid solution, with different concentrations of acid in each container. Blending 300 mL of the first solution and 600 mL of the second gives a mixture that is 15% acid, whereas blending 100 mL of the first with 500 mL of the second give a $12\frac{1}{2}\%$ acid mixture. What are the concentrations of the sulfuric acid in the original containers?	10. A Sample of bismuth-210 decayed to 33% of its original mass after 8 days.a. Find the Half life of this element.
	b. Find the mass remaining after 12 days.
12. Find the Domain of the following: $f(x) = \log_3(3x - 5x^2)$	13. Solve the equation: $log_8(x+5) - log_8(x-2) = 1$
14. Solve for x: $5^{2x+1} = 3^{4x-1}$	15. Write as one logarithm: $log(x-4) - \frac{3}{4}log(3-x) + 5log(y) - \frac{1}{2}log(z)$