

MAT 1033C Chapters 3 & 4 Test

Name: _____ Due: 2:30PM on 7 Nov 2018

Print your name on each sheet of paper you turn in, including this test paper. Other than your name, do not write on this test paper. On your scratch papers, correctly number each problem and, show work and all answers together, neatly written in pencil. Do not turn in scratch papers that have been torn out of a spiral notebook. Please do not staple your papers. Graph paper is required for Problem #5; also, a straightedge must be used for all axes and linear equations. When graphing, make sure to properly show each axis scale and label each axis.

Students may not receive help on this test from anyone who works at Valencia College.

1. The sum of six consecutive odd integers is 2172. What is the product of the first integer and the sixth integer?
2. A chemist needs to mix 9 liters of a 50% acid solution with some 20% acid solution to obtain a 38% acid solution. How many liters of the 20% acid solution should the chemist use?
3. A student borrows a total of \$4650 from two financial institutions. Some of this was borrowed from a credit union which charges 4.5% simple interest per year, and the rest was borrowed from a bank which charges 8% simple interest per year. If the total interest owed after one year is \$262.10, how much money was borrowed from each financial institution?
4. Classify the system using the appropriate terminology (*consistent, inconsistent, dependent, independent*). Please state the reason(s) for your conclusion.

$$4x + 5y = -7$$

$$3x - 7y = 27$$

5. Graph the solution set (shaded region) on graph paper for the following system of inequalities. You may use a graphing calculator to help you.

$$21x \geq 31y - 51$$

$$5x - 17y < 18$$