

Math 40
Fall 2013
Exam 1: Chapter 1
9/9/13
Time Limit: 80 Minutes

Name (Print): _____

This exam contains 2 pages (including this cover page) and 6 problems. Enter your name at the top of this page, and put your initials on all attached pages. Staple these together with this page.

You may *not* use your books, notes, or any calculator on this exam.

You are required to show your work on each problem on this exam. The following rules apply:

- **Organize your work** in a reasonably neat and coherent way **on separate paper**. Work scattered all over the page without a clear ordering will receive reduced credit.
- **Mysterious or unsupported answers will not receive full credit**. A correct answer, unsupported by calculations, explanation, or algebraic work will receive no credit; an incorrect answer supported by substantially correct calculations and explanations may receive partial credit.
- Do not cram your work into corners or into the margins.

Problem	Points	Score
1	16	
2	16	
3	16	
4	18	
5	16	
6	18	
Total:	100	

1. (16 points) Find the pattern and fill in the table.

Then write an equation for the second variable in terms of the first variable.

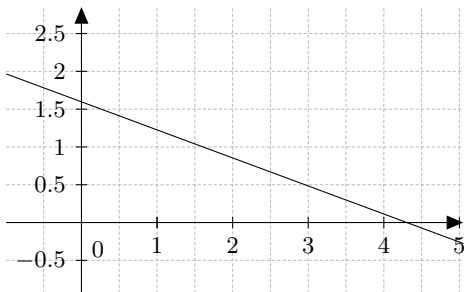
x	3	4	9	10			
y	$\frac{2}{5}$	1	4	$\frac{23}{5}$			

2. Genny is driving from her home in Indio to her parents' home in Blythe, 100 miles away.

Miles Driven	10	30	60	80	90
Miles Remaining					

- (a) (8 points) Fill in the table.
- (b) (8 points) Let d stand for the number of miles Genny has driven and r for the number of miles that remain. Write an equation for r in terms of d .
3. Consider the equation $4.5x - 3y = 27$.
- (a) (8 points) Find the intercepts for the equation and write these as ordered pairs (i.e., in the form (x, y) .)
- (b) (8 points) Construct a graph for the solution set of the equation showing all points between and including the intercepts.
4. Solve for y in terms of x . Simplify your answer either as a fraction in lowest terms or a decimal. Do not approximate.
- (a) (9 points) $-7x + 8y = 36$
- (b) (9 points) $\frac{2}{3}x - \frac{3}{4}y = \frac{5}{2}$

5. A graph for the solution set of $2.3x + 6.2y = 9.9$ is shown below. Use the graph to answer the following questions.



- (a) (4 points) Approximate the value of x where $y = 0$ to the nearest tenth.
- (b) (4 points) Approximate the value of y where $x = 0.5$ to the nearest tenth.
- (c) (4 points) Approximate the value of x where $y = 0.7$ to the nearest tenth.
- (d) (4 points) Give the approximate solution to $x > 4$ to the nearest tenth.
6. A line passes through the points $(2, 2)$ and $(4, 1)$.
- (a) (6 points) Find the slope of the line.
- (b) (6 points) Use the point slope formula to write an equation for the line.
- (c) (6 points) Write the slope-intercept form ($y = mx + b$) for the equation of the line.