Unit 9: Cumulative Review

1. Use a graphing calculator to make a scatter plot of the data in this table. Use a linear regression to produce a line of best-fit. Sketch the calculator display.

x	y
10	300
20	325
30	401
40	444
50	512

2. What type of correlation does the data of problem 1 exhibit?

3. What is the slope of the line of best-fit in problem 1?

4. What is the y-intercept of the line of best-fit in problem 1?

5. What is the equation of the line of best-fit (in problem 1) in slope-intercept form?

6. Using the equation for the line of best-fit in problem1 , algebraically determine the function value at x = 37.

7. Write an inequality that specifies all the numbers between -7(inclusive) and 13(exclusive).	8. Solve for *b* from 3(2 – b) – b = 19 + b.

9. A triangle's base is 12 inches and its height is 3 inches less than its area. What is its area? (Use two equations with two variables to solve this problem.)

10. 36 is what percent of 79?

11. 22.5% of what is 234?

12. What is the equation of a line that has a slope of 3 and passes through (10, -1)?

13. What is the equation of a line that passes through (-8, 4) and is parallel to the line given by x = 19?

14. What is the equation of the line passing through (4, 10) and (-4, 8)?

15. What is the equation of the line passing through the y-axis one unit above the origin and perpendicular to the line given by $8x - 2y = 9$?

16. If $f(x) = 4x - x - 9$ and $g(x) = x^2 + 5x$, find $3f(-2) + 2g(3)$.

17. Find the domain and range represented by this set of ordered pairs. Is it a function? Why?

{ (-4, 1), (7, 2), (8, 3), (7, -11), (10, 5) }