

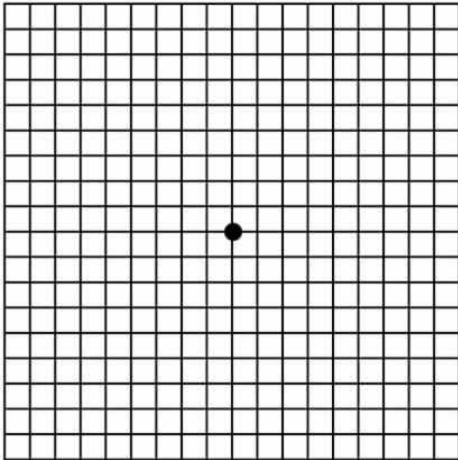
Name: _____
Date: _____
Class: _____

Algebra
Review
Graded Homework 18

Show all of your work for every problem. The numbers in the brackets are the points that each problem is worth. Multiple Choice Problems are worth 3.
NO WORK = ZERO CREDIT

1) [3] Factor: $3x^3 - 102x^2 + 864x$

2) [3] Find the solution to the equation: $|x + 3| + 2 = \frac{1}{5}x + 5$



3) [4] Two car collectors are comparing their collection. They both have two types of cars. Collector #1 has 4 of Car A, 5 of Car B, and his collection is worth \$623,275. Collector #2 has 6 of Car A, 2 of Car B, and his collection is worth \$537,180. If a 3rd Collector has 8 of each type of car, how much is his collection worth?

4) [3] A line passes through points (-2, -6) and (5, -10). You are creating a new line that will be parallel to the original line and will pass through (3, 8). What will the difference between their y-intercepts be?

5) [4] If a rectangle has an area that is represented by $32 - 12x + x^2$, create an expression that would represent the perimeter of 3 of these rectangles.

6) [4] Three people are comparing their favorite numbers. Person B has a favorite number that is 4 less than 3 times Person A. Person C has a favorite number that is 5 more than Person B. If you combine Person A and Person C's numbers together, it is 11 less than twice Person B's favorite number. What is the total of all 3 of their numbers?

7) [3] $z_1 = 14, z_2 = 19$, and $z_n = (z_{n-1})^2 - (z_{n-2})^2$. Find z_4

8) [3] Evaluate when $x = -3$: $\frac{-5x - x^2 + 2}{(x+3)^2}$