MATH 100

Test 1
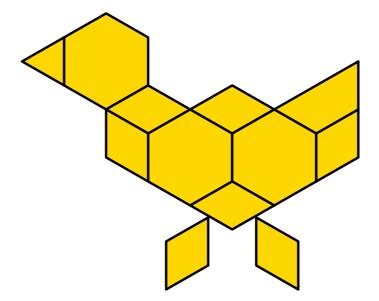
February 19, 2008

Name:

- No books, notes, or calculators are allowed.

- Please show all your work.

- Always explain your solutions and calculations.

- Each problem is worth 3 points.

- Suggestion: do the required problems first. If you have time, answer the extra credit questions.

1. A first-grade teacher is going to have her students make a number of paper dinosaurs for a counting project. She needs one hundred twenty-five 2 in × 2 in squares, on which students will trace and then cut out dinosaurs. If her construction paper has dimensions 8 in × 10 in, how many sheets of paper will she need for this project?

2. If the area of the hexagon is 1 square unit, what is the area of the bird shown below?

For extra credit: what is the perimeter of this bird?

3. Let the side of each of the small squares be 1 unit. Find the number of squares in, the area, and the perimeter of each of the shown figures. Notice the pattern and use it to predict the above quantities for the 50th figure in this sequence.
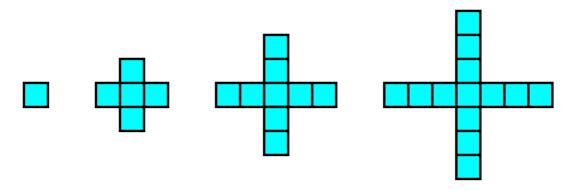

Figure in sequence	Number of squares	Area	Perimeter
1st			
2nd			
3rd			
4th			
50th			

For extra credit: find formulas for the above quantities for the n-th figure in the sequence.

4. Bob and Andy bought a pizza. Bob ate $\frac{1}{4}$ of the pizza and Andy ate $\frac{1}{3}$ of the pizza.

   (a) How much pizza was left?

   (b) If the weight of the remaining pizza is $\frac{5}{8}$ lb, what was the weight of the whole pizza?

   For extra credit: show how you can check your answers.

5. Write and solve your own story problem that requires division of fractions.