**DEPARTMENT OF MATHEMATICS & STATISTICS**
**MATH 1503**

## Paper Assignment 1

**Instructions:** Complete each of the following tasks.

**A**. Homework problems to be handed in can be found on the reverse side of this page.

**Handing in Assignment 1**:
Enter your name at the top of the reverse side. Then hand in the completed page before class on Friday, September 12. (You can print a fresh copy from the course website.)

**B**. Find the course website for your instructor. Find out how to get access university computing resources. Get used to using your UNB email.

**C**. Read the text (Goodaire), page xiii, sections 1.1 and 1.2, and

**Things I Must Remember**, page 615

**Be on the lookout** for reading checks and try all of them. (The first is on page 2.)

**D**. Try some of the following problems from the text for practice (<u>not</u> to be handed in). It may be a few days before we get to the necessary material. But read ahead!

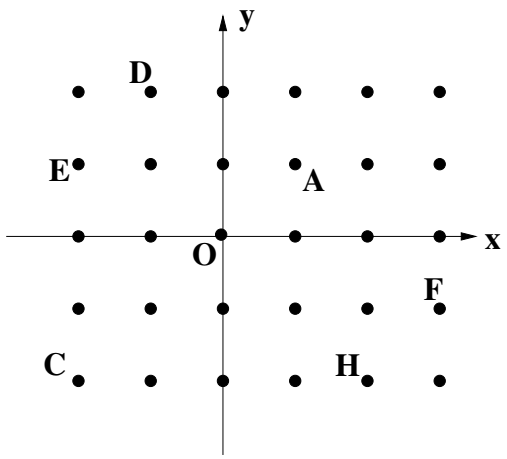
**Text Page 18** – try all True-False questions

**Page 19ff** – 2a, 3, 8c, 9a, 12b, 13a, 18a, 20a, 26a, 27, 32, 41, 48a

– Problems to be handed in can be found on the reverse side. –

Give your name and student number:

**D**. Hand in the following problems, as instructed in class. Questions refer to this diagram, with various points like $A = (1, 1)$, etc. labelled.




1. Sketch and clearly label by $\vec{v}$ the vector with head $(2, 0)$ and tail $(3, 2)$.

2. Fill in the missing letters:

$$\vec{AD} = \vec{O\_\_} \quad , \quad \vec{DE} = \vec{\_\_H}$$

3. For what point $K$ do we have $\vec{CK} = \vec{OA}$? Label $K$ in the diagram and give its coordinates here:

$$K = (\quad , \quad )$$

4. This question has nothing directly to do with the above diagram. But the previous parts may help you think along the right lines.

   A quadrilateral $PQRS$ is 4-sided figure, with the vertices $P, Q, R, S$ *occuring in that order* as we run round the figure. Parallelograms are a special case.
   We can use a vector equality to characterize parallelograms. Thus, complete in some useful vector way the following

   Conjecture: Quadrilateral $PQRS$ is a parallelogram precisely when

$$\vec{\_\_\_\_} = \vec{\_\_\_\_} \ .$$

   (Fill in the missing letters; no 'proof' is needed. Do you see why there is more than one correct answer?)