Name: _____

Instructor: _____

Math 10120, Quiz-1
January 31, 2014

- The Honor Code is in effect for this examination. All work is to be your own.
- No calculators.
- The exam lasts for 10 min.
- Be sure that your name is on every page in case pages become detached.
- Be sure that you have all 2 pages of the test.

PLEASE MARK YOUR ANSWERS WITH AN X, not a circle!				
1. (a)	(b)	(c)	(d)	(e)
2. (a)	(b)	(c)	(d)	(e)

Multiple Choice

1.(5 pts.) Let A and B be subsets of some universe set U. If $n(U) = 25$, $n((A \cup B)') = 10$, $n(A \cap B) = 5$, $n(B) = 7$, how many elements are in A but not in B?
  [Hint: Draw a Venn Diagram.]

(a) 5   (b) 8

(c) 2   (d) 3

(e) 13

2.(5 pts.) A math club has 30 members, 20 which are math majors, 7 physics majors and 3 biology majors. In how many ways can we choose a committee consisting of 4 math majors, 2 physics majors and 1 biology major?

(a) $P(20,4) \cdot P(7,2) \cdot P(3,1)$ (b) $C(20,4) + C(7,2) + C(3,1)$

(c) $P(30,7)$ (d) $P(20,4) + P(7,2) + P(3,1)$

(e) $C(20,4) \cdot C(7,2) \cdot C(3,1)$