1) Assume that each of the following problems begins with the diagram and declarations of class **Node** on page 281 of your text book. Show the outcome of each set of statements. (10 points)

    a. p = **new** Node();
       p.setItem(3);
       q = head.getNext();
       p.setNext(q.getNext());
       head = p;

    b. p = **new** Node();
       p.setItem((head.getNext()).getItem());
       p.setNext((head.getNext()).getNext());

2) The operations declared for any ADT can be augmented by user written methods that use the basic operations provided by the ADT. Assume that an ADT Stack exists that implements the operations described on page 332 of your text. USING JUST these operations write a method (in pseudo code) to reverse the contents of a "**stacka**". This method should have the following heading: (10 points)

       public void reverse(Stack stacka)

    Inside this method you can declare as many instances of other stacks as needed. (no queues ☺)

3) Problem 3 on page 414. (10 points)