Managerial Accounting problems

1. Jernigan Ltd. Is a textile manufacturer in the southeastern United States, with annual sales of $15 million. Jennigan is a weaver of high end upholstery fabric. Until just a few years ago, the US textile industry was the leading producer of such high-end fabric, but recent imp0rovement s in technology and growing investment in nations around the world have changed the industry. The president of Jernigan Ltd., Mary Jernigan, is committed to remaining competitive in the increasingly challenging market. Mary believes that her company cannot effectively compete on price alone. Instead, she believes that quality control is the is the most likely strategy for ensuring the company’s competitiveness. After a recent meeting of the industry trade group, Mary decided that it is time for an expanded emphasis on quality. She instructs her quality control manager and the company’s controller to accumulate data related to existing quality control processes so she can assess whether the company is doing all it can in this area. They prepare the following list for Mary’s consideration.

* Customer returns during the most recent year totaled 16,000 yards of fabric. Each yard of fabric required repairs costing and average of $6 per yard.
* Jennigan employs five fabric quality inspectors who perform inspections after the production process is completed. Each individual is pain an annual salary of 27, 000
* The final inspection generally results in a rejection of $30,000 yards each year. Approximately 70 percent of this fabric can be reworked, at an average of cost $3.00 per yard.
* The quality inspectors use special equipment that requires periodic maintenance bythe equipment manufacturer’s technicians. This maintenance and related operating costs total $200,000.
* An average of 40, 000 yards is scraped annually. The fabric generally has an average cost of $12.50 per yard.
* The company’s quality control program requires all new employees to complete a one-day training program. In addition, current employees are required to complete one half-day refresher program each year. The training program cost $80,000 annually.
* An additional “roaming” supervisor was hird this year at a salary of $55,000. Her job is to addres quality problems before fabric is through the production process.
* The quality control manager estimates the company has lost sales of $750,000 due to thir decision to purchase their fabric from other supplies.
* Annual sales allowances issued to customers due to quality problems are approximately $195,000.

Need:

A. Prepare a report that shows quality costs by category and in total. Comment on the relative proportion of the various cost to total annual sales.

B. Discuss the distribution of quality costs among the four categories. For example, what is the relative proportion of total quality cost devoted to prevention, detection and so forth. Are they distributed in an appropriate manner?

C. Mary Jennigan is considering the implementation of a quality control program that promises to reduce quality costs to 3 percent of sales and to limit failure cost (i.e.) internal and external failure costs) to just 20 percent of the total quality costs. By how much will profit increase if sales remain at $15 million?