****

**TCET 4140 Telecommunication Network Management**

**Professor Viviana Vladutescu**

**Project 2**

1. Cisco company is trying to bring a new model of a router (let’s say Cisco 3845 Integrated Services Router) to the market. According to the marketing department, the best selling price for a similar model from a world-class competitor is $250 per router. The company wants to sell at the same price as its best competitor. The cost break down of the new model is as follows:

Assembling time for the first unit: 1hour

Handling time: 10%of assembling time

Direct labor rate: $15/hour

Planning labor: 10% of direct labor

Quality control: 50% of direct labor

Factory overhead: 200% of total labor

General and Administrative expense: 300% of total labor

Direct material cost: $7.5/router

Outside manufacture: $70/router

Packing cost: 10% of total labor

Facility rental: 10% of total labor

Profit: 20% of total manufacturing cost

Number of units: 2000

Since the company mainly produces subassemblies purchased from other manufacturers and repackages the product, the direct material cost is estimated at only $7.5 per router. Direct labor consists of handling time and assembling time. The company estimates that the learning curve for assembling the new model is 95%. Compute the total manufactured cost for 2000 of these routers and determine the selling price. How can the company reduce its costs to meet its target costs.

2. Find the value of the unknown quantity Z in the following diagram, such that the equivalent cash outflow equals the equivalent cash inflows when r=20% compounded continuously.

A=$500/year

 1 2 3 4 5 6 7 8 9

Z

Z