Daniel Manufacturing Company uses two departments to make its products. Department 1 is a cutting department that is machine intensive and uses very few employees. Machines cut and form parts and then place the finished parts on a conveyor belt that carries them to Department 2 where they are assembled into finished goods. The assembly department is labor intensive and requires many workers to assemble parts into finished goods. The company’s manufacturing facility incurs two significant overhead costs, employee fringe benefits and utility costs. The annual costs of fringe benefits are $252,000 and utility costs are $180,000. The typical consumption patterns for the two departments are as follows.

Department 1 Department 2 Total

Machine hours used 16,000 4,000 20,000

Direct labor hours used 5,000 13,000 18,000

The supervisor of each department receives a bonus based on how well the department controls costs. The company’s current policy requires using a single activity base (machine hours or labor hours) to allocate the total overhead cost of $432,000.

Required:

1. Assume that you are the supervisor of Department 1. Choose the allocation base that would minimize your department’s share of the total overhead cost. Calculate the amount of over-head that would be allocated to both departments using the base that you selected.
2. Assume that you are the supervisor of Department 2. Choose the allocation base that would minimize your department’s share of the total overhead cost. Calculate the amount of overhead that would be allocated to both departments using the base that you selected.
3. Assume that you are the plant manager and have the authority to change the company’s overhead allocation policy. Formulate an overhead allocation policy that would be fair to the supervisors of both Department 1 and Department 2. Compute the overhead allocations for each department using your policy.
4. Explain why it is necessary to disaggregate the overhead cost pool in order to accomplish fairness.