CE 5333 – Special Topics in Water Resources Exercise Set 2

Purpose: Engineering economy concepts as applied to decision making.

Exercise

1. Costs and revenue for a set of projects is listed in the table.

Project ID:	A	B	C	D	E
Cost	39	83	117	155	194
Benefit	100	150	175	185	190

   Which project should be selected?

2. Using the same tabular information, determine the incremental costs to implement any project other than A, and the incremental benefit. Which project should be selected if the guideline is that incremental benefits must equal or exceed incremental costs, and the goal is to maximize benefits, without violating the incremental cost rule.

3. A community has spent $500,000 developing a new well but has not yet obtained water. The geologist estimates that another $500,000 will be required to guarantee a good supply, but that there is a 30% chance that a good supply may be obtained after spending only $100,000. A spring exists several miles away from which an equivalent supply could be pumped for $400,000. Which course of action would you recommend and why?