# IE 522 – Optimization Methods:

**Sensitivity analysis – quiz questions**

Dr. Hugh Medal

THE UNIVERSITY OF
TENNESSEE
KNOXVILLE

# Example: Gepbab

- Gepbab Corporation produces three products at two different plants. The cost of producing a unit at each plant is shown on the next slide. Each plant can produce a total of 10,000 units.

- At least 6,000 units of product 1, 8,000 units of product 2, and 5,000 units of product 3 must be produced.

- Formulate an LP to minimize cost. Solve your LP and use the solution to answer questions on slides 4 and 5.

# Example: Data

| | Product | | |
|---|---|---|---|
| **Plant** | **1** | **2** | **3** |
| **1** | 5 | 6 | 8 |
| **2** | 8 | 7 | 10 |

# Question 1

- What would the cost of producing product 2 at plant 1 have to be for Gepbab to start producing there?

# Question 2

- What would the total cost be if plant 1 had 9,000 units of capacity?

# Question 3

- If it cost $9 to produce a unit of product 3 at plant 1, then what would be the new optimal solution?