

## Admin Notes / Agenda

- Lesson Review
- Warm Up
- PSL

# 1 Key Definitions for What If

Linear programming models rely on several fundamental assumptions that ensure the relationships between variables remain linear and mathematically tractable:

1. **binding:** A constraint is binding if the left-hand side and the right-hand side of the constraint are equal when the optimal values of the variables are substituted into the constraint.
2. **non-binding:** A constraint is non-binding if the left-hand side and the right-hand side of the constraint are unequal when the optimal values of the decision variables are substituted into the constraint.
3. **Shadow Price:** A shadow price is how much the objective function value is increased if the right-hand side value of a binding constraint is increased by 1, as long as it remains a binding constraint.