The Theory of Consumer Choice

Part III

APPLICATIONS

Application 2: Wages and Labor Supply

- How do wages affect labor supply?
- We can use the same theory to analyze how a person allocates time. People spend some of their time enjoying leisure and some of it working so they can afford to buy consumption goods
- Trade-off between leisure and consumption

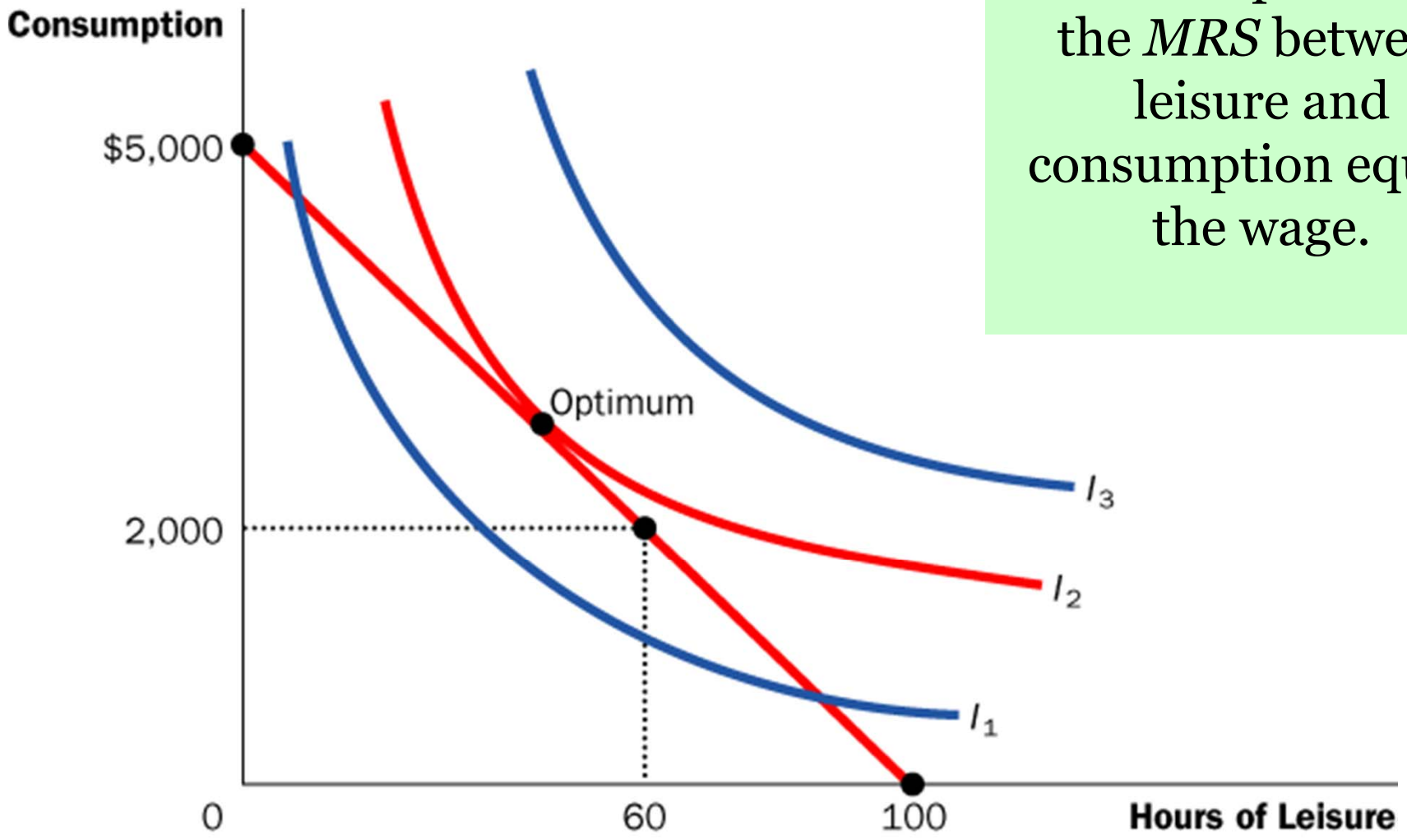
- Consider the decision facing Sally, a freelance software designer
  - Sally is awake for 100 hours per week. She spends some of her time enjoying leisure
  - She spends the rest of her time at computer developing software
  - For every hour she works developing software, she earns $50, which she spends on consumption goods
- Her wage reflects the trade-off Sally faces between leisure and consumption
- For every hour of leisure she gives up, she works one more hour and gets $50 of consumption

Budget constraint

- Shows a person's tradeoff between consumption and leisure.
- Depends on how much time she has to divide between leisure and working.
- The relative price of an hour of leisure is the amount of consumption she could buy with an hour's wages.

Indifference curve

- Shows "bundles" of consumption and leisure that give her the same level of satisfaction.

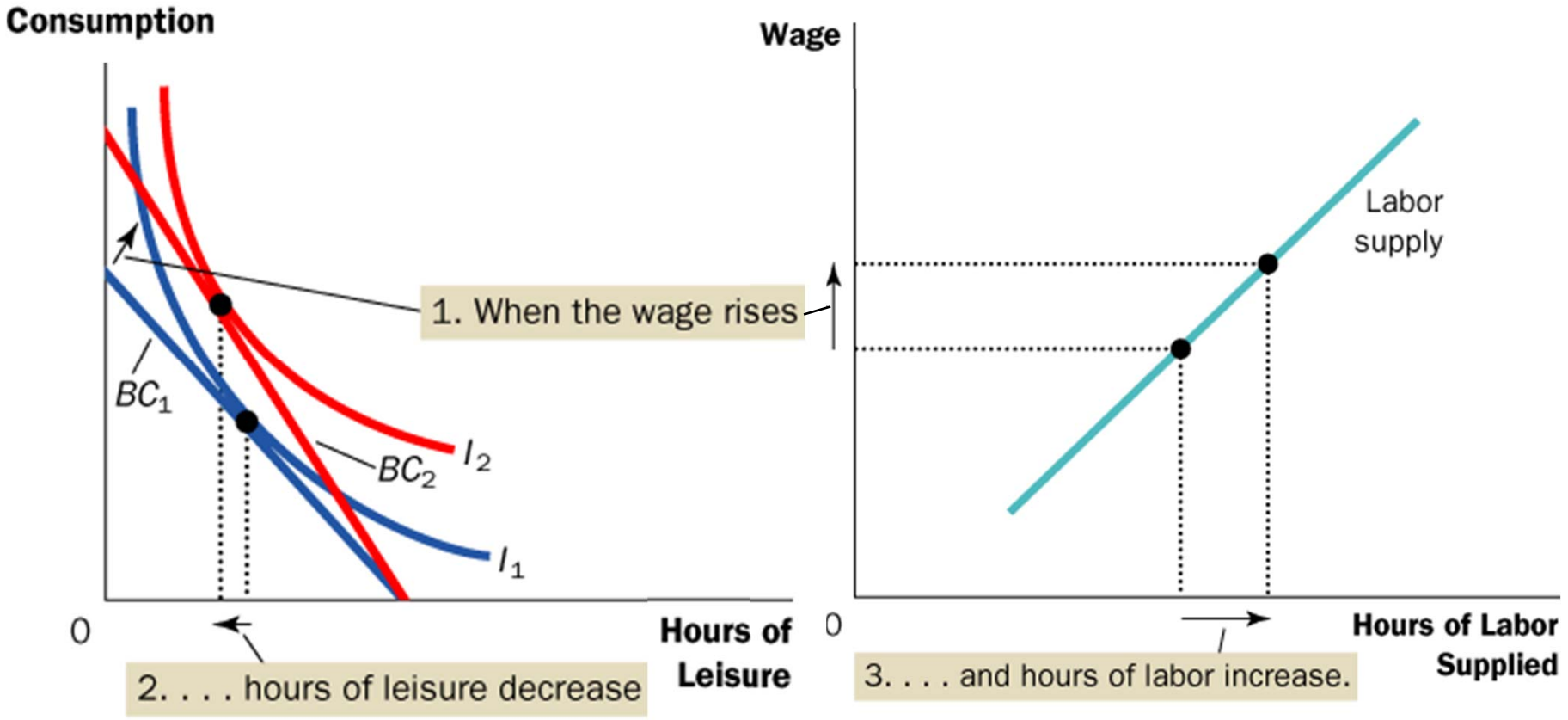


At the optimum, the *MRS* between leisure and consumption equals the wage.

Now consider what happens when Sally's wage increases from $50 to $60 per hour.

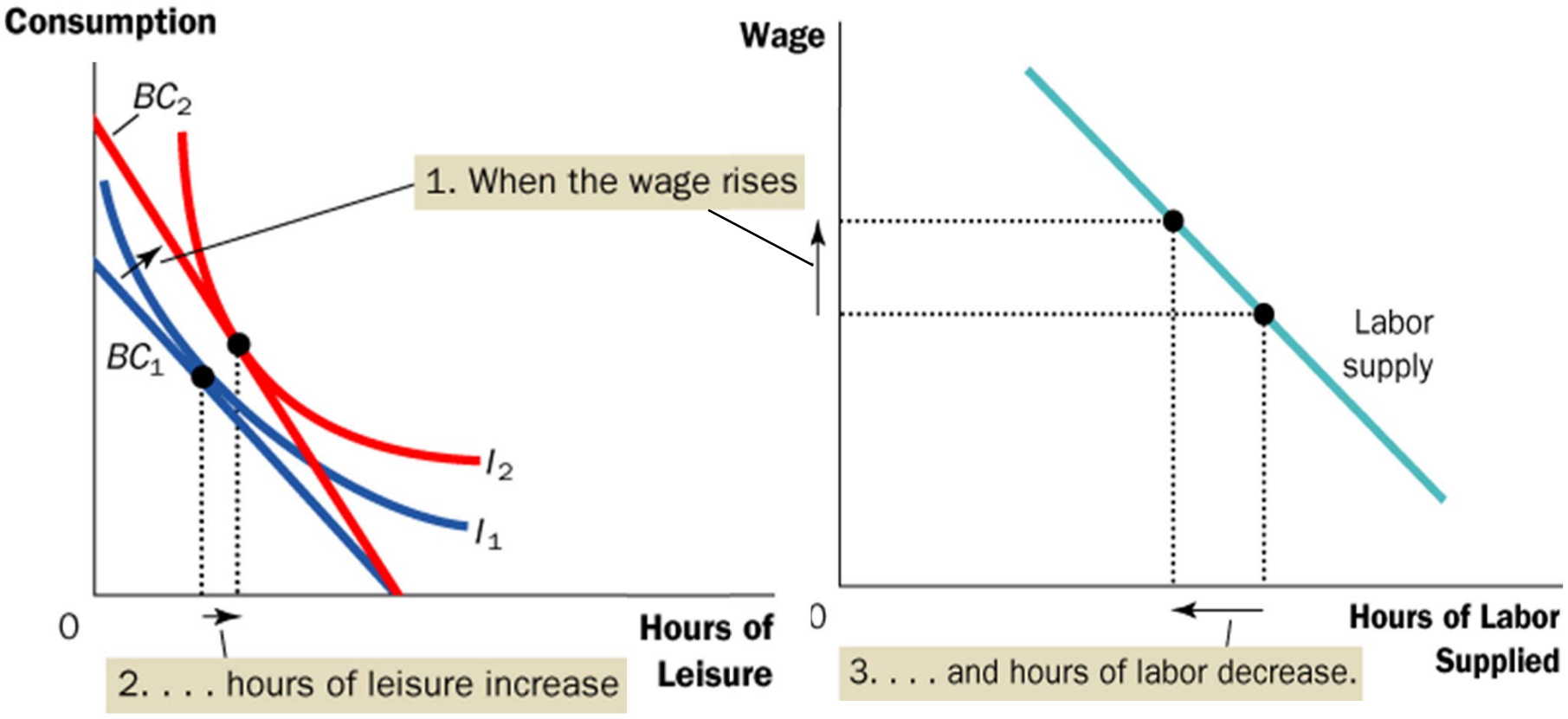
For this person, *SE* > *IE*

So her labor supply increases with the wage



For this person, *SE* < *IE*

So his labor supply falls when the wage rises



An increase in the wage has two effects on the optimal quantity of labor supplied

- *Substitution effect (SE)*: A higher wage makes leisure more expensive relative to consumption.
  The person chooses less leisure,
  i.e., increases quantity of labor supplied.

- *Income effect (IE)*: With a higher wage, she can afford more of both "goods."
  She chooses more leisure,
  i.e., reduces quantity of labor supplied.

- A higher wage induces Sally to enjoy less leisure and work more, so the labor-supply curve slopes upward
- A higher wage induces Sally to enjoy more leisure and work less, so the labor supply curve is puzzling
- The labor supply curve, therefore could be either upward or backward-sloping