Consumer Surplus and Deadweight Loss

An Application

• The government now imposes a tax $T$ on the product. What happens to consumer surplus?

• Consumer Surplus Declines

• Consumer Surplus Lost to Taxes

This is not a loss. The money is transferred to the government, and thus takes the place of other taxes.

An Application

• The demand for a product is $Q = 100 - 2p$.

This is a total loss. No one benefits from the Deadweight Loss.
**Consumer Surplus and Deadweight Loss**

- The demand for a product is $Q = 100 - 2p$.
- The good sells for $10$.
- The Government imposes a tax of $5$.

**Taxes**

- Original $CS = 1600$

**New CS**

- $CS = \frac{1}{2} \times 70 \times 35 = 1225$

- Lost to taxes $350$

- $DW Loss = \frac{1}{2} \times 10 \times 5 = 25$

**Monopoly Pricing**

- The demand for a product is $Q = 100 - 2p$.
- A Monopolist, who can make the product for nothing, sells it for $10$.
Monopoly Pricing

- The demand for a product is \( Q = 100 - 2p \).
- A Monopolist, who can make the product for nothing, sells it for $10, making a profit of $800.

\[
\text{CS} = $1600
\]

Monopoly Pricing

- The Monopolist now raises the price to $15, making a profit of $1050.

\[
\text{CS} = $1225
\]

\[
\text{Lost to higher price} = 350
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\[
\text{DW Loss} = \frac{1}{2} \times 10 \times 5 = 25
\]
End