What is Producer Surplus?

Worksheet

Producer surplus is the difference between the market price received and the minimum acceptable price: PS = (P − P_min) × Q. It measures the economic welfare gained by sellers.

PS = (P - P_r) × Q

PS = Producer surplus (currency units)
P = Market price received (currency units)
P_r = Reservation price (minimum acceptable) (currency units)
Q = Quantity supplied (units)

Questions

1. Market price 15, reservation10, quantity 200. Producer surplus?

A) $1,000
B) $3,000
C) $5,000
D) $2,000

2. If reservation price equals market price, producer surplus is...

A) Maximum
B) Zero
C) Negative
D) Undefined

3. Producer surplus formula is?

A) P × Q
B) (P − P_r) × Q
C) P ÷ Q
D) P_r + Q

4. Which increases producer surplus?

A) Lower prices
B) Higher reservation price
C) Higher market price
D) Less quantity

5. A farmer sells wheat at 5/bushel when they'd accept3/bushel. They sell 1,000 bushels. What is producer surplus?

6. A firm has a reservation price of 20, market price is28, and they sell 100 units. Calculate producer surplus.

7. Market price is 50, reservation price is40, and quantity sold is 250 units. Find producer surplus.

8. Define: What is producer surplus?

9. Define: Does producer surplus increase with higher prices?

10. Define: Unit of producer surplus?

Answer Key

1. A) \$1,000 — PS = (15 − 10) × 200 = 5 × 200 = \$1,000.
2. B) Zero — PS = (P − P) × Q = 0 × Q = 0.
3. B) $(P - P_r) \times Q$ — Producer surplus = (Market price − Reservation price) × Quantity.
4. C) Higher market price — Higher market price increases the gap $(P - P_r)$, thus increasing surplus.
5. $PS = (P - P_r) \times Q$ PS = (5 − 3) × 1,000 PS = 2 × 1,000 = \$2,000
6. PS = (28 − 20) × 100 PS = 8 × 100 = \$800
7. PS = (50 − 40) × 250 PS = 10 × 250 = \$2,500
8. The difference between the market price and the seller's minimum acceptable price: $PS = (P - P_{min}) \times Q$.
9. Yes — higher market prices increase the gap between price and reservation price.
10. Currency units (same as price) — it represents economic benefit in monetary terms.