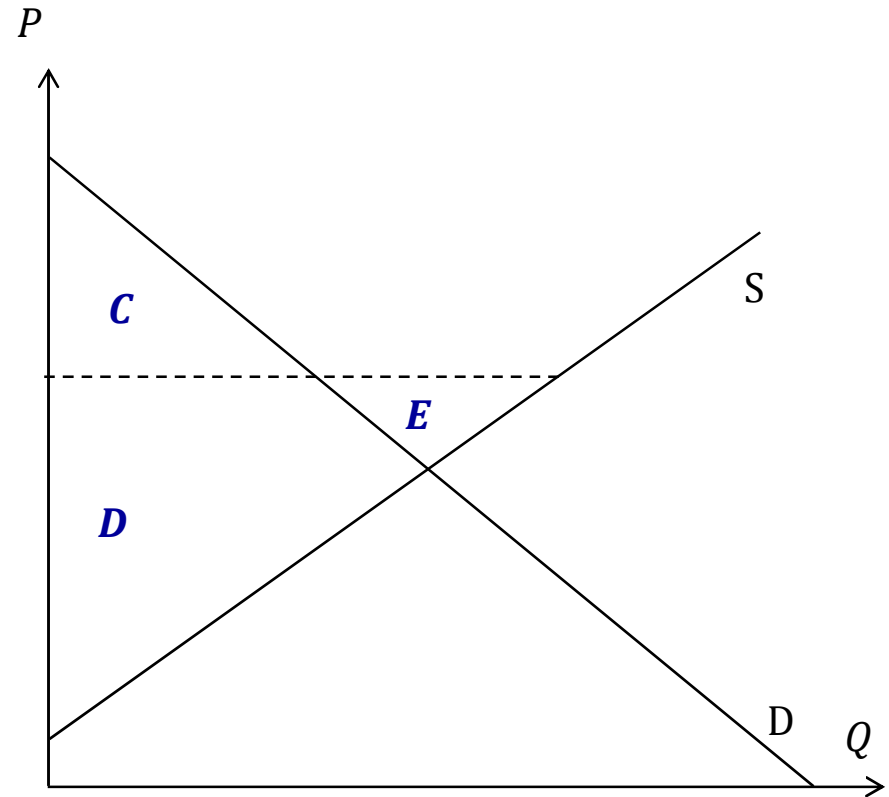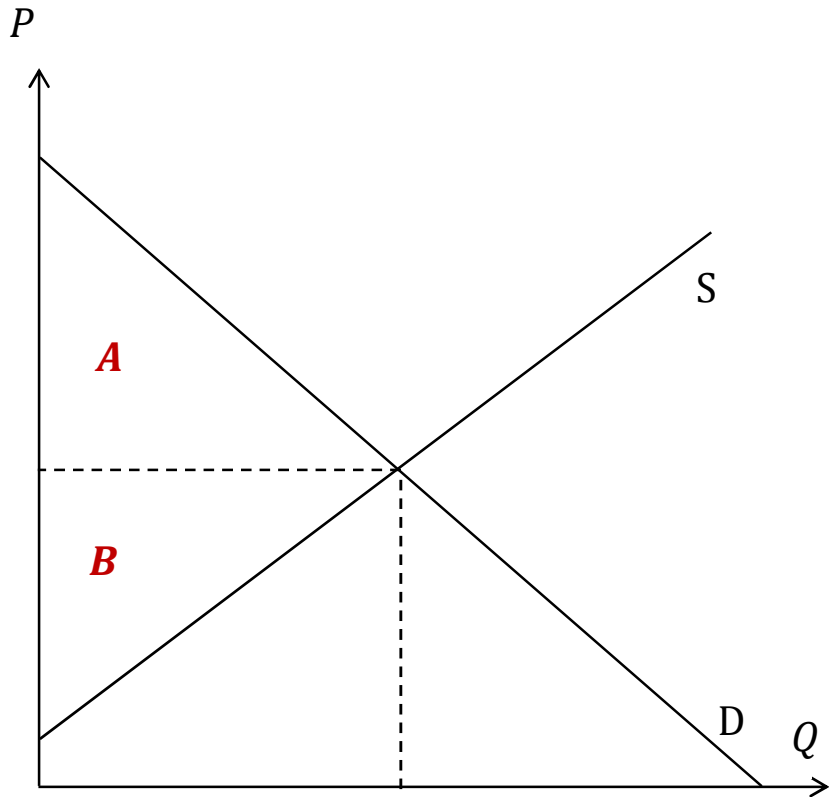# Introductory Microeconomics

Tutorial 5

Nhan La

# Surplus

# Task 1

a/

$$Q_D = 10000 - 500W$$

$$Q_S = 500W$$

To find equilibrium wage and hours of labour, solve:

$$\begin{cases} Q^* = 10000 - 500W^* \\ \quad\; Q^* = 500W^* \end{cases}$$

$$W^* = 10; Q^* = 5000$$
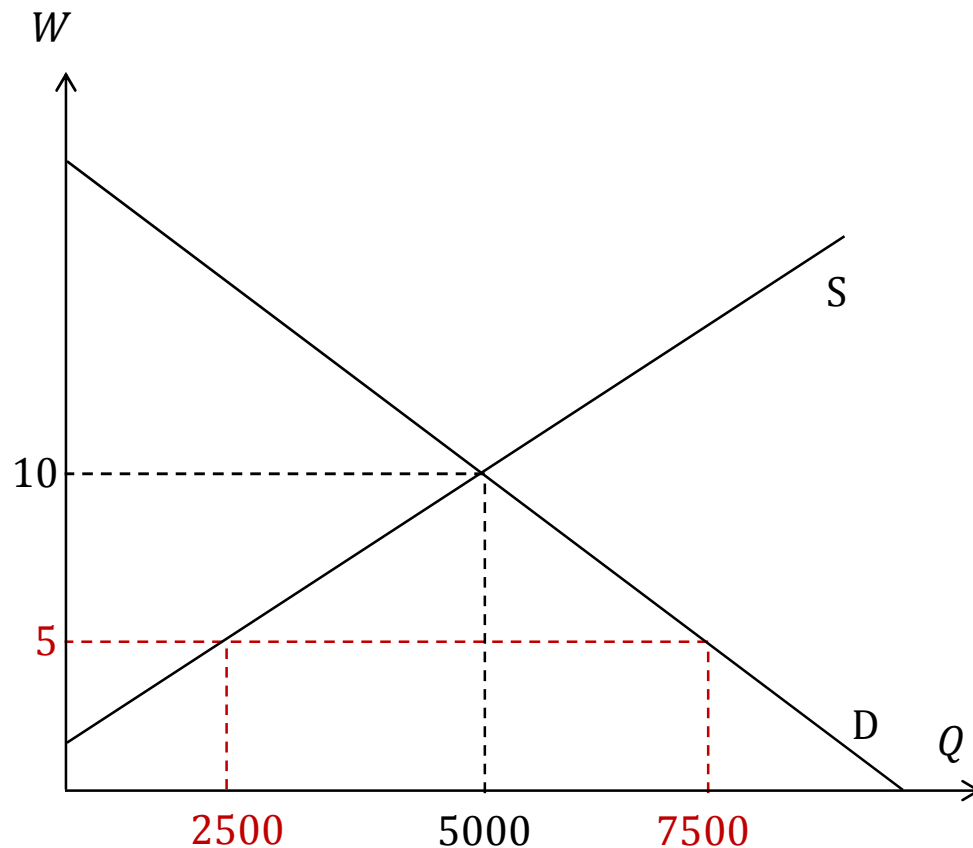
# Task 1

b/ $Q_D = 10000 - 500W$ ; $Q_S = 500W$

i) New equilibrium

- $W = 5$

- Not in this graph. Why?
  - Domestic curves

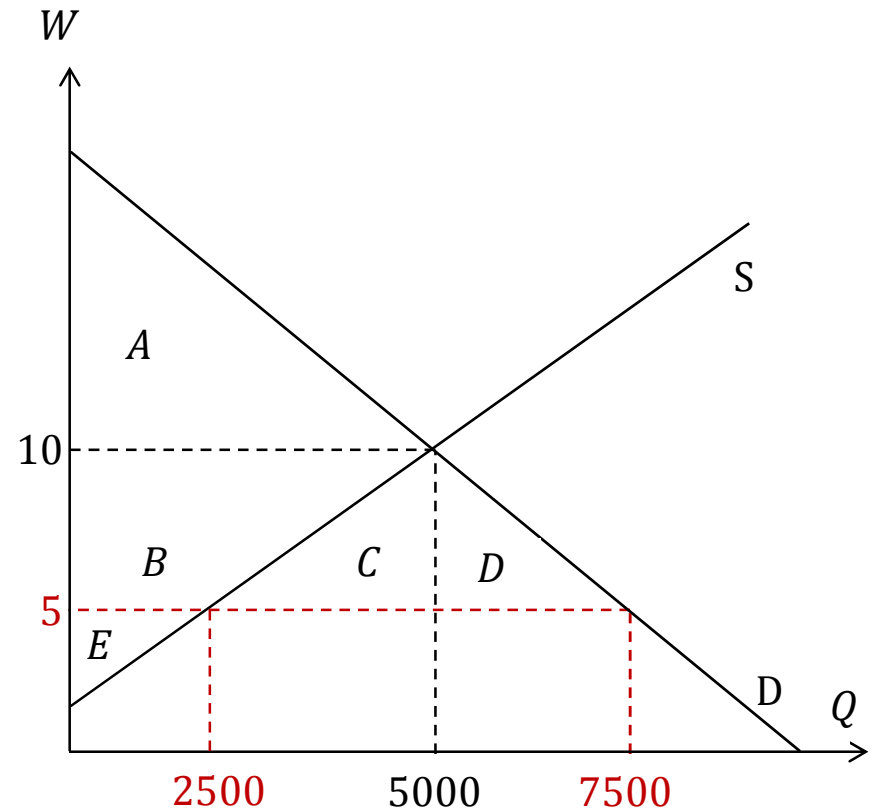ii) $Q_D = 7500$

iii) $Q_S = 2500$

iv) $Q_{imp} = Q_D - Q_S = 5000$

# Task 1

c/

| Surplus | Autarky | Trade | Change |
|---------|---------|-------|--------|
| i) Workers | B+E | E | -B |
| ii) Firms | A | A+B+C+D | B+C+D |
| iii) Total | A+B+E | A+B+C+D+E | C+D |

$W$

$S$

$A$

10

$B$ $C$ $D$

5

$E$

$D$

$Q$

2500    5000    7500

# Task 1

c/

| Surplus | Autarky | Trade | Change | |
|---|---|---|---|---|
| i) Workers | B+E | E | -B | Worse off |
| ii) Firms | A | A+B+C+D | B+C+D | Better off |
| iii) Total | A+B+E | A+B+C+D+E | C+D | Positive |

# Task 1
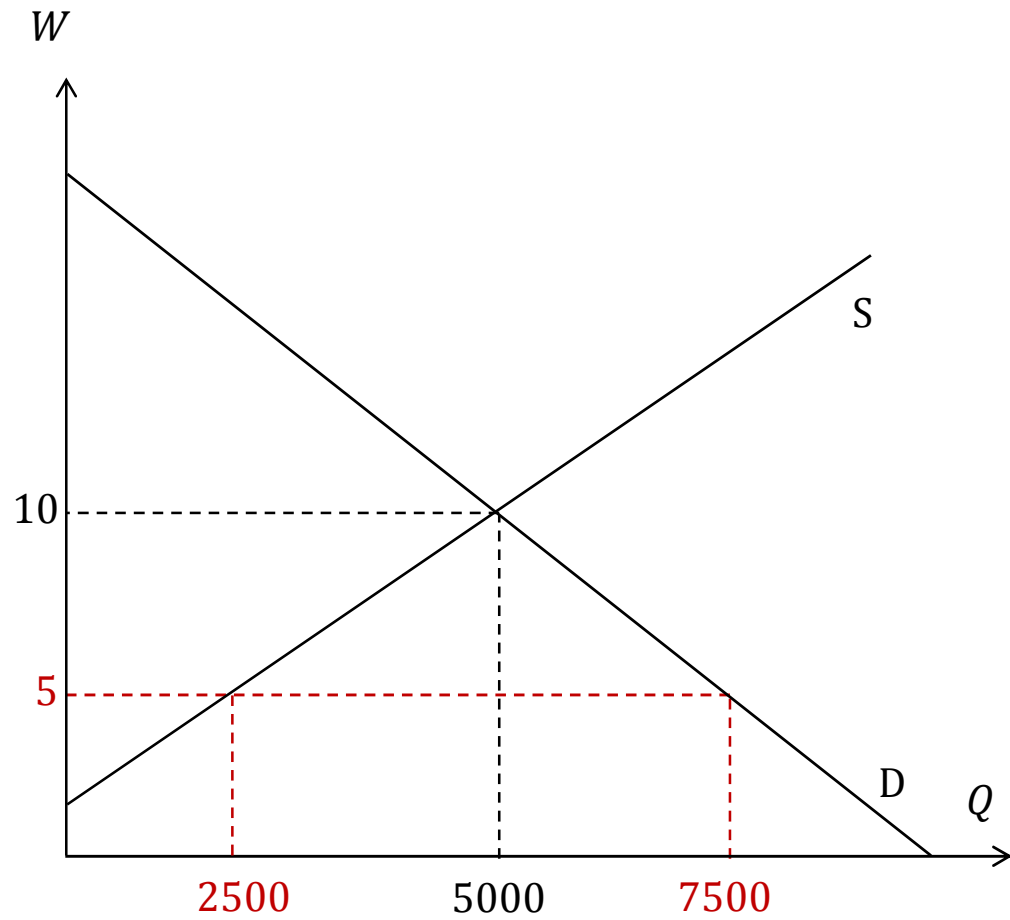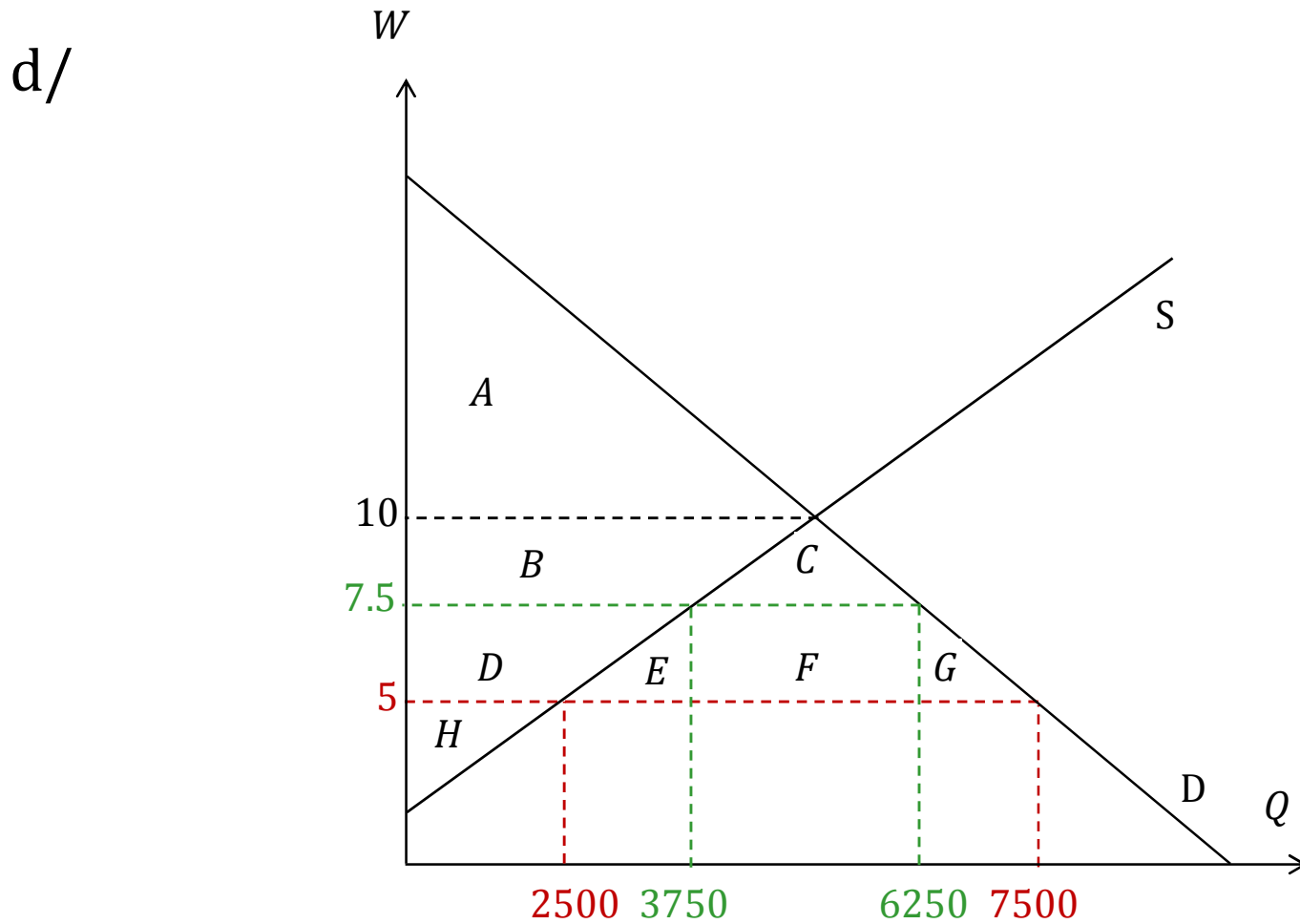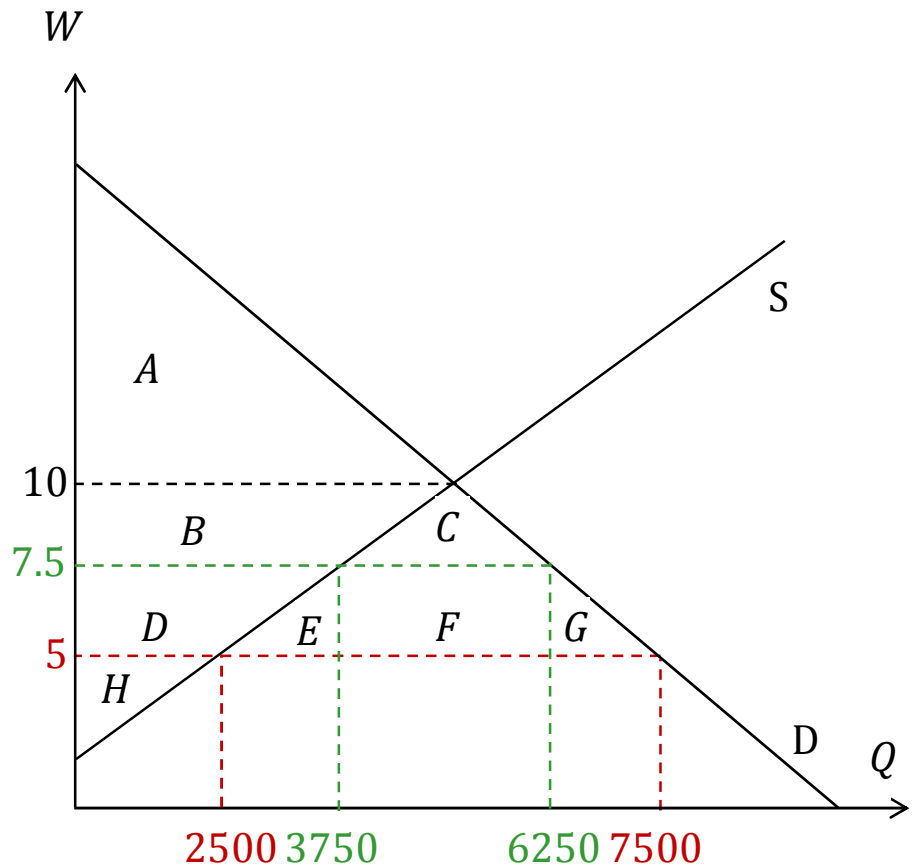
# Task 1

# Task 1

d/ $Q_D = 10000 - 500W$ ; $Q_S = 500W$

Tax as tariff on imports

Increase $W = 5 + 2.5 = 7.5$

$Q_D = 6250$

$Q_S = 3750$

$Q_{imp} = Q_D - Q_S = 2500$

# Task 1

d/

| Surplus | Trade | With tax | Change |
|---|---|---|---|
| i) Workers | H | D+H | D |
| ii) Firms | A+B+C+D+E+F+G | A+B+C | -D-E-F-G |
| iii) Government | | F | F |
| iii) Total | A+B+C+D+E+F+G+H | A+B+C+D+F+H | -E-G |
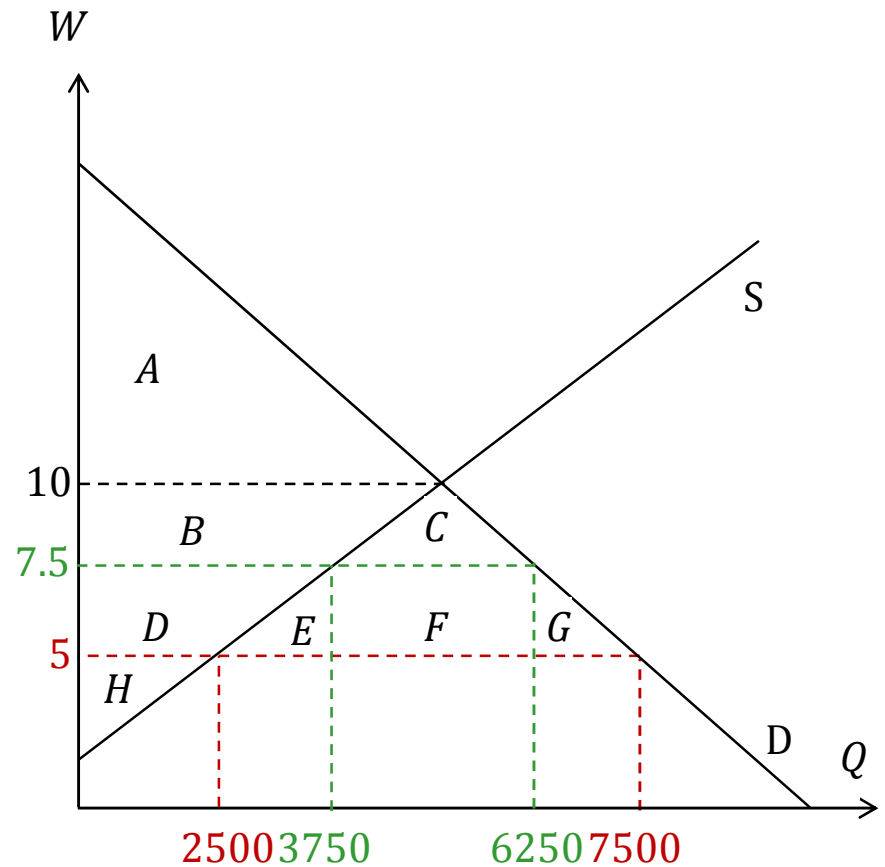
# Task 2

a/
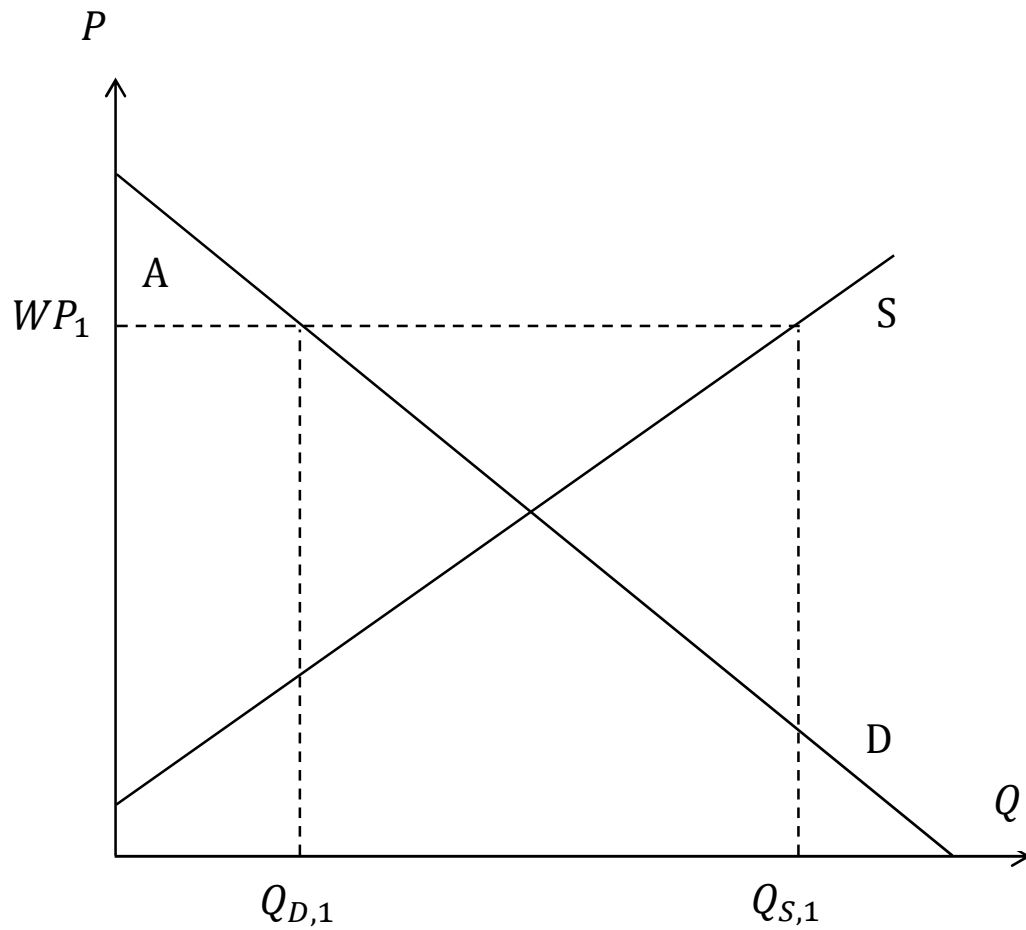
# Task 2

a/

# Task 2

a/
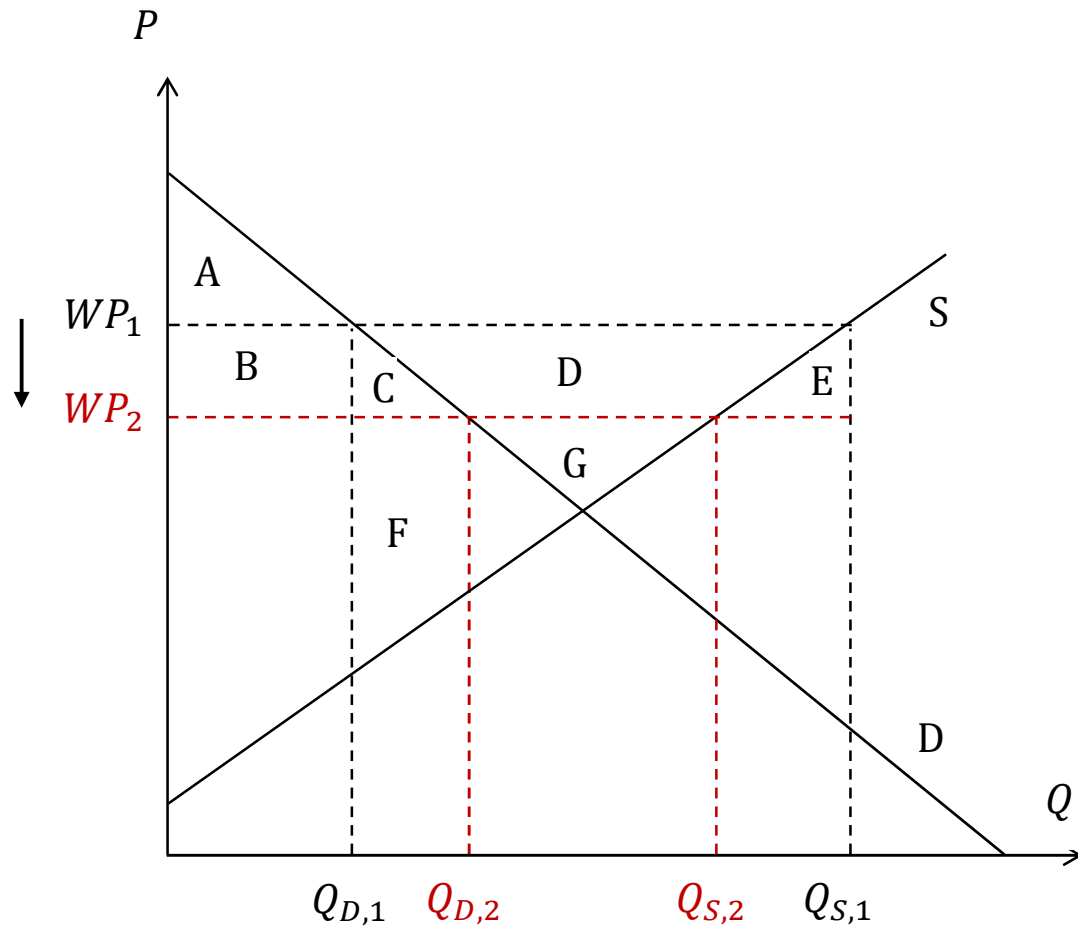


| Domestic Surplus | $WP_1$ | $WP_2$ | Change |
|---|---|---|---|
| Consumers | A | A+B+C | B+C |
| Suppliers | B+C+D+F+G | F+G | -B-C-D |
| Total | A+B+C+D+F+G | A+B+C+F+G | -D |

# Task 2

a/
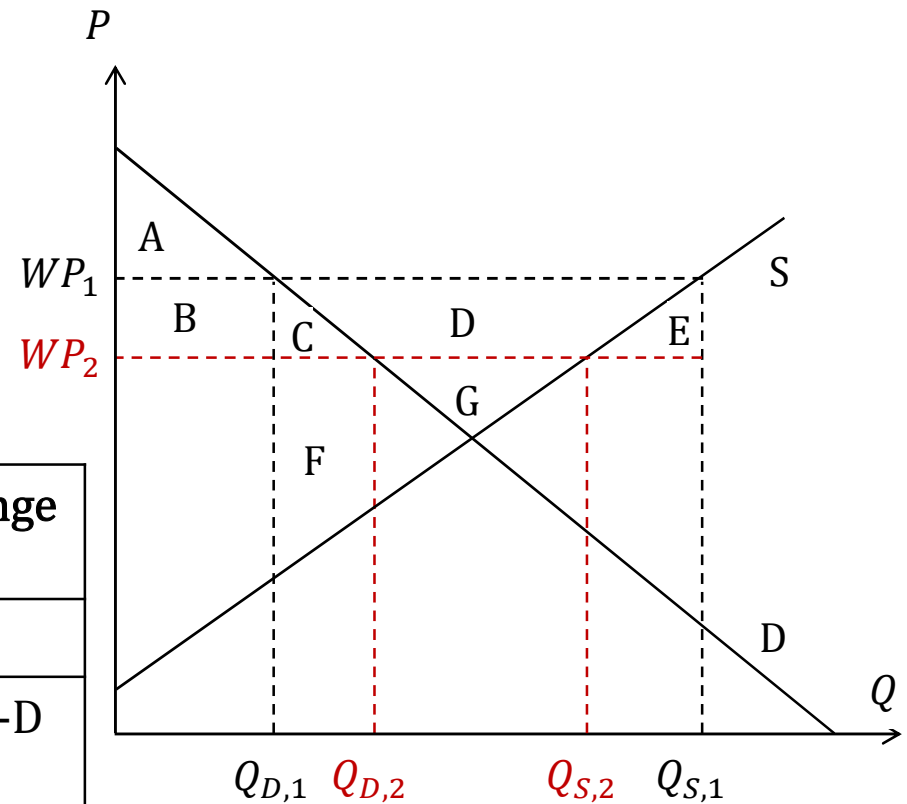
| Domestic Surplus | $WP_1$ | $WP_2$ | Change | |
|---|---|---|---|---|
| Consumers | A | A+B+C | B+C | Better off |
| Suppliers | B+C+D+F+G | F+G | -B-C-D | Worse off |
| Total | A+B+C+D+F+G | A+B+C+F+G | -D | Negative |

# Task 2

b/



Diagram showing a supply and demand graph. The vertical axis is labeled $P$ and the horizontal axis is labeled $Q$. The price levels $WP_1$ and $WP_2$ (in red) are marked on the vertical axis, with an upward arrow between them. Regions are labeled A, B, C, D, E, F, and G. The horizontal axis shows quantities $Q_{D,1}$, $Q_{D,2}$ (red), $Q_{S,2}$ (red), and $Q_{S,1}$. The supply curve is labeled S and the demand curve is labeled D.

# Task 2

b/

- Customers pay $WP_1$, or $WP_2 + S$.
  - Why?
- Subsidy doesn't apply for domestic trades.

| Domestic Surplus | $WP_2 + S$ | $WP_1$ | Change |
|---|---|---|---|
| Consumers | A | A | 0 |
| Suppliers | B+C+D +F+G | B+C+D+ F+G | 0 |
| Government | -C-D-E | 0 | -C-D-E |
| Total | A+B+F+ G – E | A+B+C+ D+F+G | -C-D-E |