Consumer choice (more detailed)

1 Budget constraint (BC) (budget line)

Good B

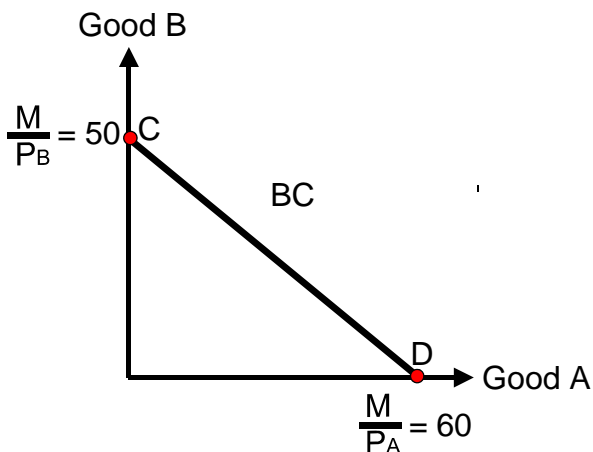$\frac{M}{P_B} = 50$ C

BC

D Good A

$\frac{M}{P_A} = 60$
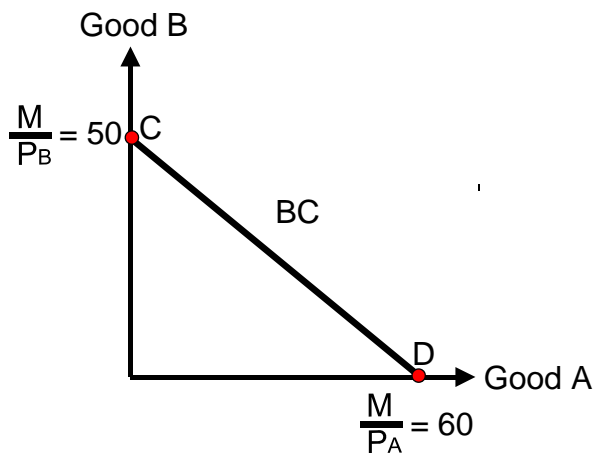
Price good A = 10 (P_A)
Price good B = 12 (P_B)
Income (M) = 600

a
The budget constraint shows **combinations** of 2 goods that can be purchased at **given prices** by assuming that the **whole income** is **spent**.

b
Point C   Only good B is purchased (600/12 = 50).
Point D   Only good A is purchased (600/10 = 60).
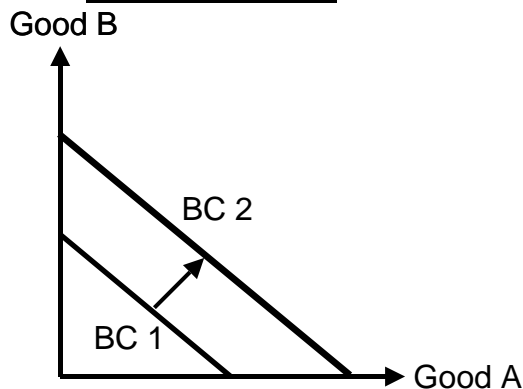
11 Slope of the budget constraint

Good B

$\frac{M}{P_B} = 50$ C

BC

D Good A

$\frac{M}{P_A} = 60$

a

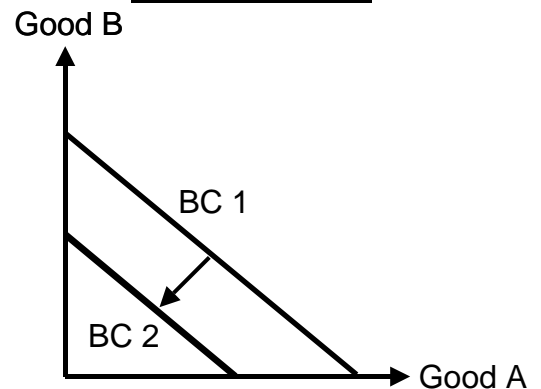Slope $= -\frac{50}{60} = -\frac{10}{12} = -\frac{5}{6}$

b

Slope in general $= -\dfrac{M}{\text{Price B}} : \dfrac{M}{\text{Price A}}$

$= -\dfrac{\textbf{Price A}}{\textbf{Price B}}$

12 Effects of a change in income on the budget constraint
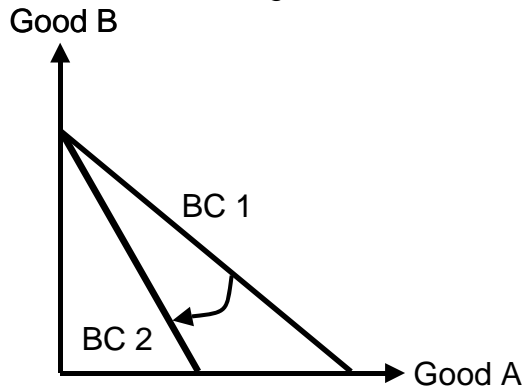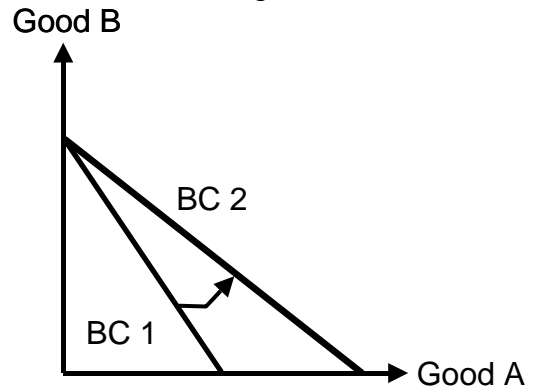
121 Income **rises**

Good B

BC 2

BC 1

Good A

122 Income **falls**

Good B

BC 1

BC 2

Good A

13   Effects of a change in price on the budget constraint

<u>131 Price of good A **rises**</u>

Good B

BC 1

BC 2

Good A

<u>132 Price of good A **falls**</u>

Good B

BC 2

BC 1

Good A

2   Indifference curve (IC)

Good B

IC
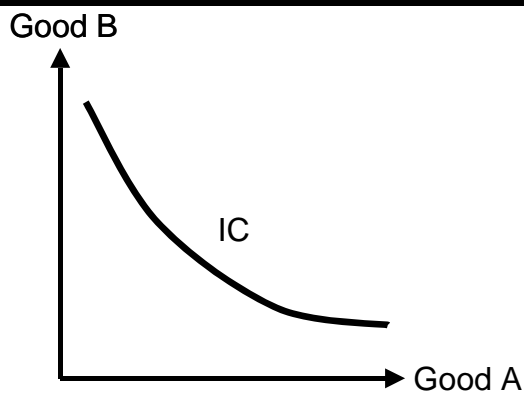
Good A
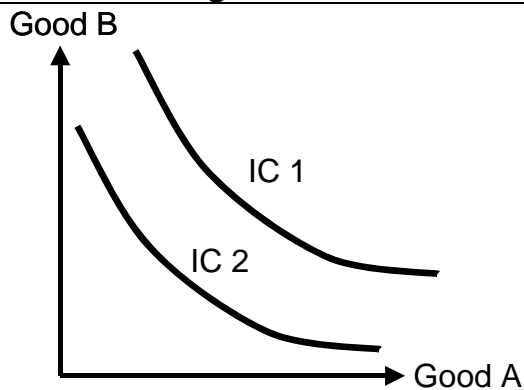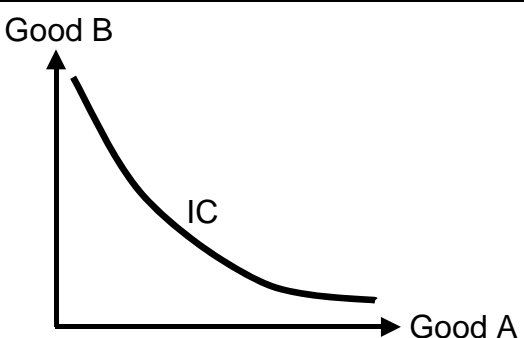
Along an indifference curve the bundles of good A and B give **the same satisfaction**.

21   A higher indifference curve is preferred to a lower one

Good B

IC 1

IC 2

Good A

Indifference curve 1 gives more satifsfaction than indifference curve 2. Therefore **IC 1 is preferred to IC 2**.

22 Indifference curves are downward sloping and convex to the origin

Good B

IC

Good A

To gain additional units of A, good B must be given up.

As we move along the indifference curve, less and less of good B has to be given up to gain an additional unit of A. This phenomenon is called **diminishing marginal rate of substitution** (look 24).

23   Indifference curves cannot cross

Good B, IC 2, IC 1, C, D, E, IC 1, IC 2, Good A
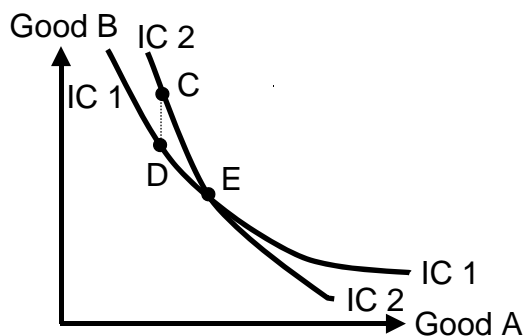
At point E, both indifference curve 1 and 2 give the same satisfaction. At point C the satisfaction is higher than at point D which is not possible in regard to E because along the indifference curve the satisfaction remains the same.

24   Slope of the indifference curve

Good B, IC, $\triangle B$, $\triangle A$, IC, Good A
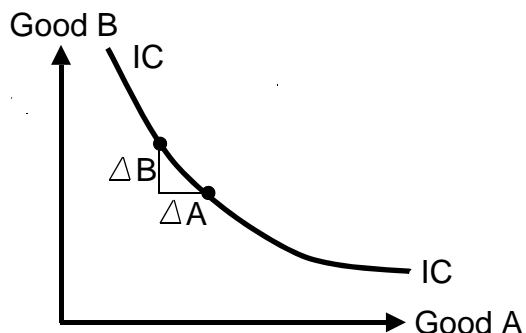
- **Marginal rate of substitution** (MRS)

$$MRS = -\, \Delta B \,/\, \Delta A$$

- **Diminishing MRS**: As we move along the indifference curve, less and less of B is given up to get an extra unit of A.
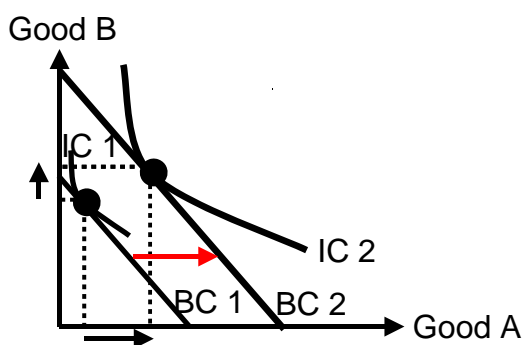
3   Consumer choice

Good B, X, IC, BC, Good A
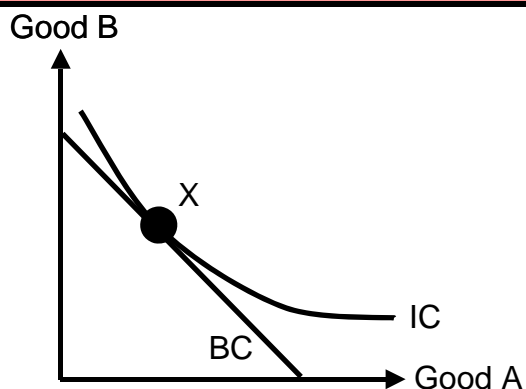
At point X:

$$MRS = \frac{\text{Price good A}}{\text{Price good B}}$$

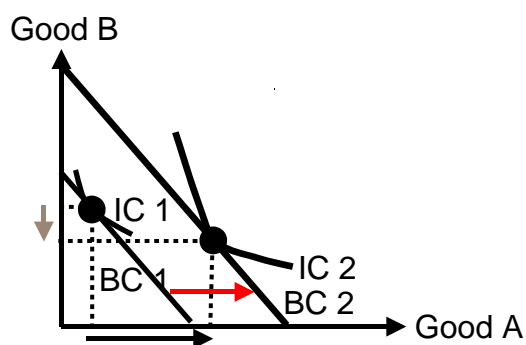$\rightarrow$ **Optimum for the consumer**

The optimum is located where the budget constraint touches the **highest possible indifference curve**.

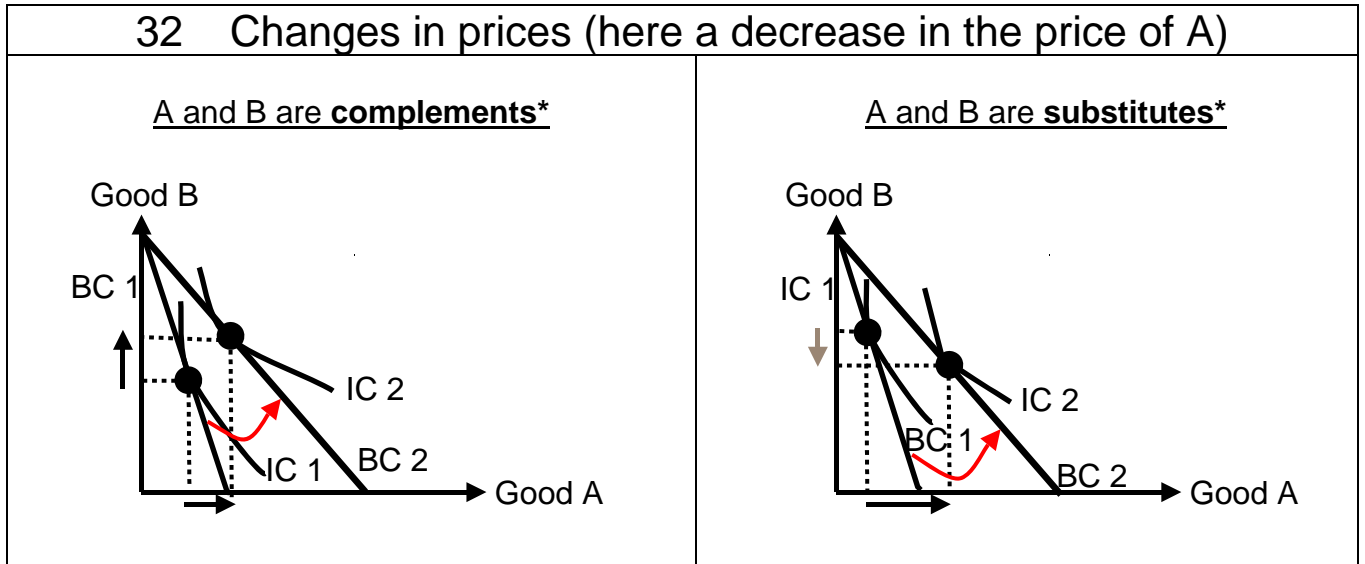## 31   Changes in income (here an increase)

Both A and B are **normal*** goods

Good B, IC 1, IC 2, BC 1, BC 2, Good A

A is a **normal*** good, **B** an **inferior*** one

Good B, IC 1, IC 2, BC 1, BC 2, Good A

32 Changes in prices (here a decrease in the price of A)

A and B are **complements***	A and B are **substitutes***

* Elasticities:

Normal good if income elasticity of demand **>** 0
Inferior good if income elasticity of demand **<** 0

Complements if cross-price elasticity of demand **<** 0
Substitutes if cross-price elasticity of demand **>** 0