# MARKET ECONOMICS

## LAW OF DEMAND &
## JUSTIFYING LAW OF DEMAND
## [UNIT 2]

MIND-HUB ECON-HUB THEORY-RECAP

# LAW OF DEMAND [L.o.D]

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**'The law of demand states that there is a negative (indirect) or inverse relationship between price and quantity demanded of a given product, when all other factors affecting demand remain constant, during a given period of time'.**

**Alternatively:**

Law of demand states that when the price of a given product increases or is at a higher level the quantity demanded of the product tend to fall or be at a lower level and when the price decreases or is at lower level the quantity demanded of the product will rise or be at a higher level.

| **Δ Px** | | **Δ Qdx** |
|---|---|---|
| ↓ | → | ↑ |
| ↑ | → | ↓ |

Change in price of product (X) **ΔPx** and change in quantity demanded of product (X) **ΔQdx** has a negative **(indirect) relationship,** while factors other than price affecting the demand of product (X) remain constant.

Justifying LoD:

**Price Effect = Substitution Effect + Income Effect**

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# PRICE EFFECT (PE)

The Law of Demand (LoD) is explained using the **‘Price Effect** or **Consequence’.**

**The price effect refers to the impact on quantity demanded of a given product, due to a change in its price, while other factors affecting demand are held constant.**

The price effects operates through two main forces or sub-effects:

- **Substitution Effect**
- **Income Effect**

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# SUBSTITUTION EFFECT (SE)

| Δ Px | | Relative Price | | Δ Qdx | SE | PE |
|---|---|---|---|---|---|---|
| ↓ | → | ↓ (Cheaper) | → | ↑ ↑ | Negative (-) | Negative (-) |
| ↑ | → | ↑ (Expensive) | → | ↓ ↓ | Negative (-) | Negative (-) |

**Ceteris Paribus:** Price of related products (including the price of substitutes for the given product) and **all other factors** (factors other than the price of the given product) are **held constant.**
Assume the product is a **'Normal Good'**

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# DEFINING SUBSTITUTION EFFECT

Substitution effect of a price change is the tendency of consumers to change quantity demanded of a given good as a result of its **relative price changing**.

**When all other factors affecting demand of a product are held constant *(especially price of substitute goods and consumers' nominal income)*, if only the price of the product concerned increases, consumers "Substitute away" from the product concerned (i.e., decrease quantity demanded), since the good becomes relatively expensive and if price decreases, consumers shall 'Substitute in favour' of the product concerned (i.e., increase quantity demanded), since it becomes relatively cheap.**

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# SUBSTITUTION EFFECT ….

Price and quantity demanded always moves in opposite directions. Thus, irrespective of whether the price increased or decreased, the substitution effect is always **negative** (or **non-positive** for normal and inferior goods or zero for neutral goods).

If the prices of all goods change in equal percentages, there would be no change in relative prices and no substitution effect will take place.

Source: P. Perera , p. 128

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# INCOME EFFECT (IE)

| Δ Px | | Real Income | | Δ Qdx | IE | PE |
|---|---|---|---|---|---|---|
| ↓ | → | ↑ (Richer) | → | ↑ ↑ | Positive (+) | Negative (-) |
| ↑ | → | ↓ (Poorer) | → | ↓ ↓ | Positive (+) | Negative (-) |

**Ceteris Paribus:** Consumers' **nominal (money) income** and **all other factors** (factors other than the price of the given product) are **held constant.**
Assume the product is a **'Normal Good'**

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# DEFINING INCOME EFFECT

Income effect of a price change is the change in quantity demanded of a product because the change in its price has the effect of changing a consumer's real income.

**When all other factors affecting demand of a normal good are held constant *(specially consumers money income and price of related products)*, if the price of the product concerned increases, the quantity demanded for the product is decreased, since the consumers' real income decreases *(i.e., consumers become relatively poor),* and if price falls, consumers shall increase their quantity demand, since consumers' real income increases (i.e., consumers become relatively richer).**

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# INCOME EFFECT ….

However, the income effect of a price change is not always positive, and it could be negative for inferior goods or even zero for neutral goods, which shows that the income effect varies according to the type of the good.

Source: P. Perera , p. 128

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# CLASSIFICATION OF GOODS BASED ON ‘SUBSTITUTION EFFECT (SE)’ AND INCOME EFFECT (IE)’ OF A PRICE CHANGE

## Price Effect of a ‘Normal Good’

| Change in Price | Substitution Effect (SE) | Income Effect (IE) | Price Effect (PE) |
|---|---|---|---|
| Decrease in Price ($\Delta$P -) | Negative ($\Delta$Qd +) | Positive ($\Delta$Qd +) | Negative ($\Delta$Qd +) |
| Increase in Price ($\Delta$P +) | Negative ($\Delta$Qd -) | Positive ($\Delta$Qd -) | Negative ($\Delta$Qd -) |

In terms of a normal good, both the substitution effect and the income effect works towards establishing the negative price effect or law of demand, and generally tend to be equal in power.

## CLASSIFICATION OF GOODS BASED ON ‘SUBSTITUTION EFFECT (SE)’ AND INCOME EFFECT (IE)’ OF A PRICE CHANGE

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### Price Effect of a ‘Inferior Good’

| Change in Price | Substitution Effect (SE) | Income Effect (IE) | Price Effect (PE) |
|---|---|---|---|
| Decrease in Price ($\Delta$P -) | Negative ($\Delta$Qd +) | Negative ($\Delta$Qd -) | Negative ($\Delta$Qd +) |
| Increase in Price ($\Delta$P +) | Negative ($\Delta$Qd -) | Negative ($\Delta$Qd +) | Negative ($\Delta$Qd -) |

In terms of an inferior good, the substitution effect is in support of law of demand, and the income effect works against the law of demand. The overall price effect is negative or in support of law of demand, since supportive substitution effect overpowers the opposing income effect.

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# GIFFEN GOOD

## [ONE OF THE INSTANCES THAT DEFY THE L.O.D.]

**This is a special type of inferior good. A rise in price leads to an increase quantity demanded, when other non-price factors affecting demand are held constant**. In other words, the price quantity demanded relationship is **positive**, thus the demand curve becomes **upward sloping from left to right**.

**With regards to giffen goods a rise in price leads to a rise in quantity demanded because of the substitution effect but a rise in quantity demanded because of the income effect. However, the income effect outweighs the substitution effect, leading to rises in quantity demanded as price rises.**

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# Price Effect of a 'Giffen Good'

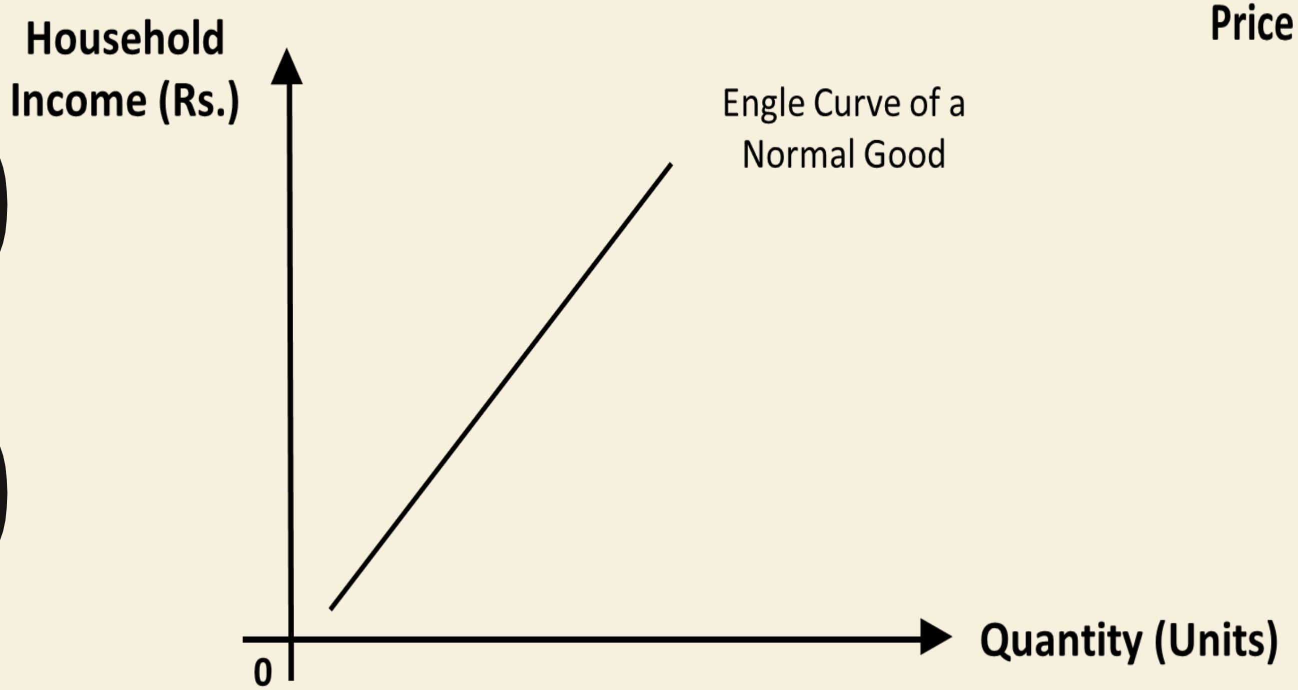
| Change in Price | Substitution Effect (SE) | Income Effect (IE) | Price Effect (PE) |
|---|---|---|---|
| **Decrease in Price ($\Delta$P -)** | **Negative ($\Delta$Qd +)** | **Negative ($\Delta$Qd -)** | **Positive ($\Delta$Qd -)** |
| **Increase in Price ($\Delta$P +)** | **Negative ($\Delta$Qd -)** | **Negative ($\Delta$Qd +)** | **Positive ($\Delta$Qd +)** |

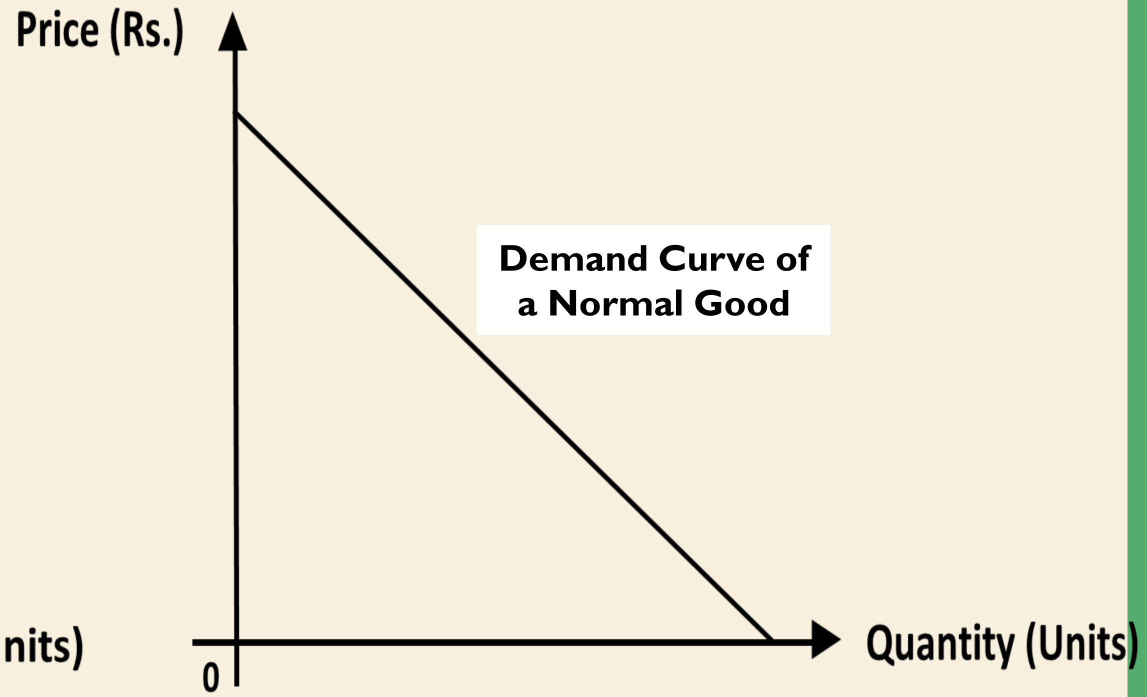
**Essentially, for good to become a giffen good, two conditions need to be fulfilled:**

(01) The good should be an **inferior good** (the income effect of a price change should work in against the LoD, i.e., negative income effect)

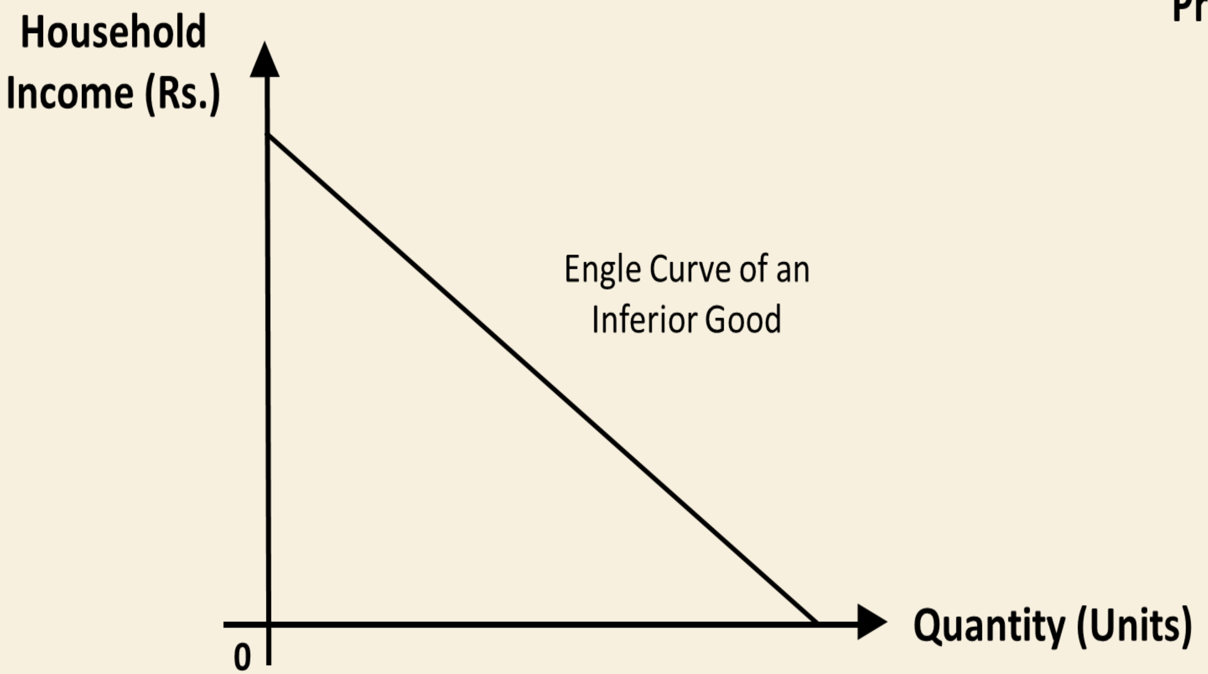
(02) The **income effect** of a price change, should **outweigh** the **substitution effect** (making the overall price effect, against the LoD)

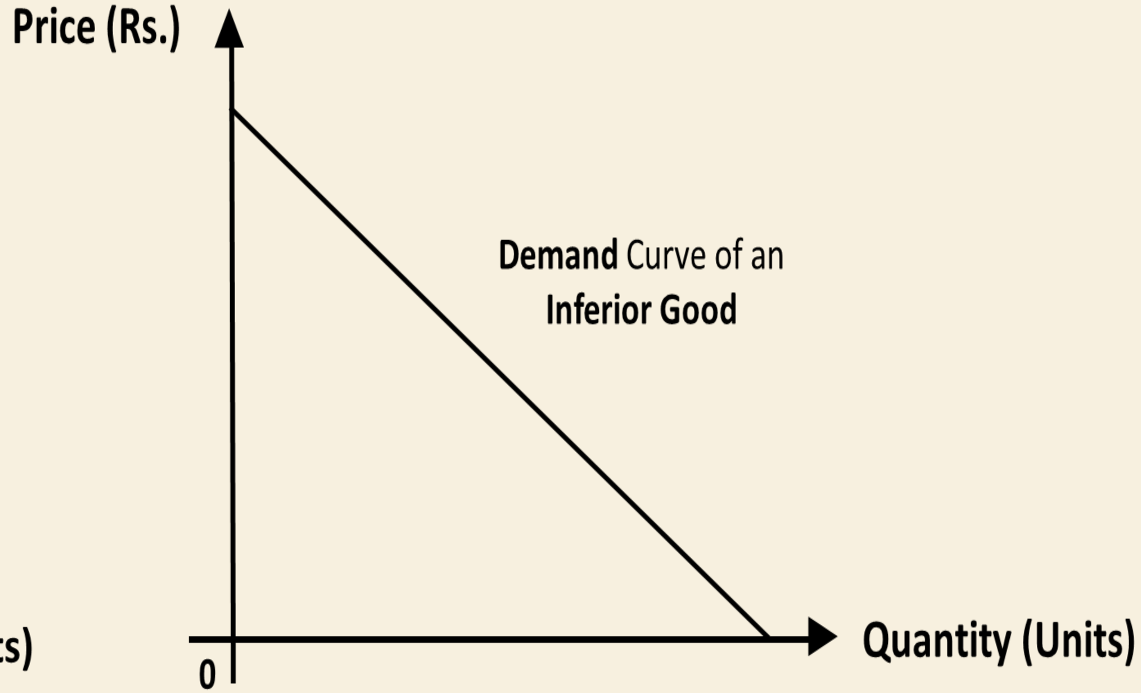
# REPRESENTING A NORMAL GOODS



# REPRESENTING AN INFERIOR GOODS



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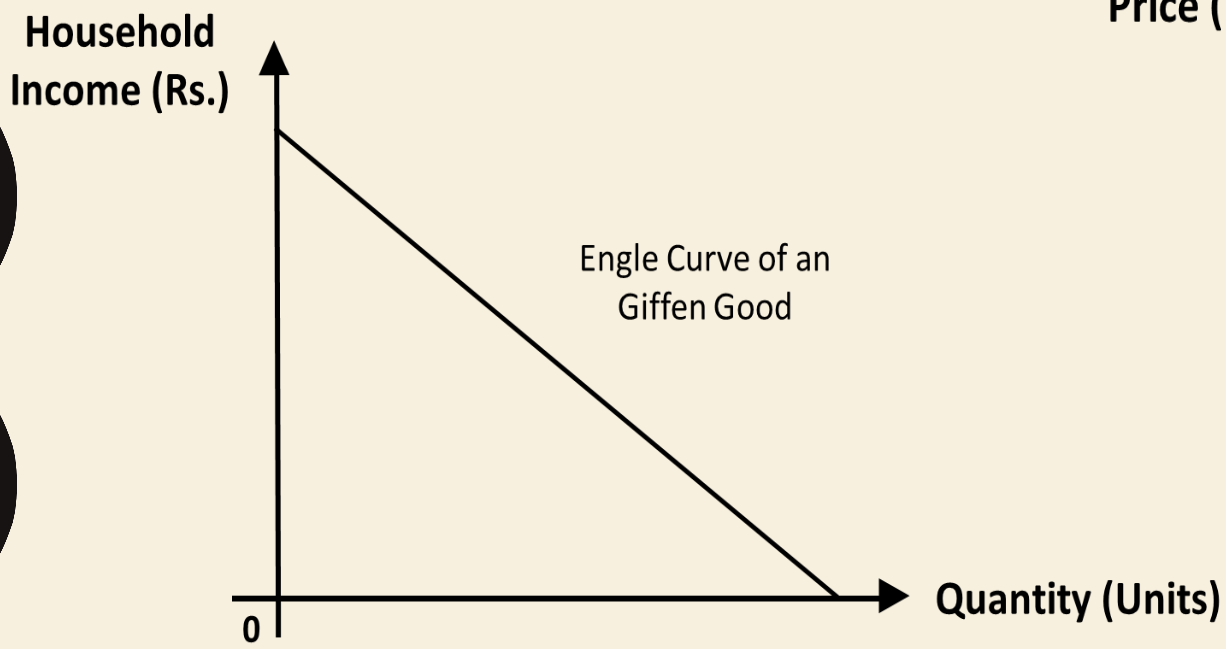
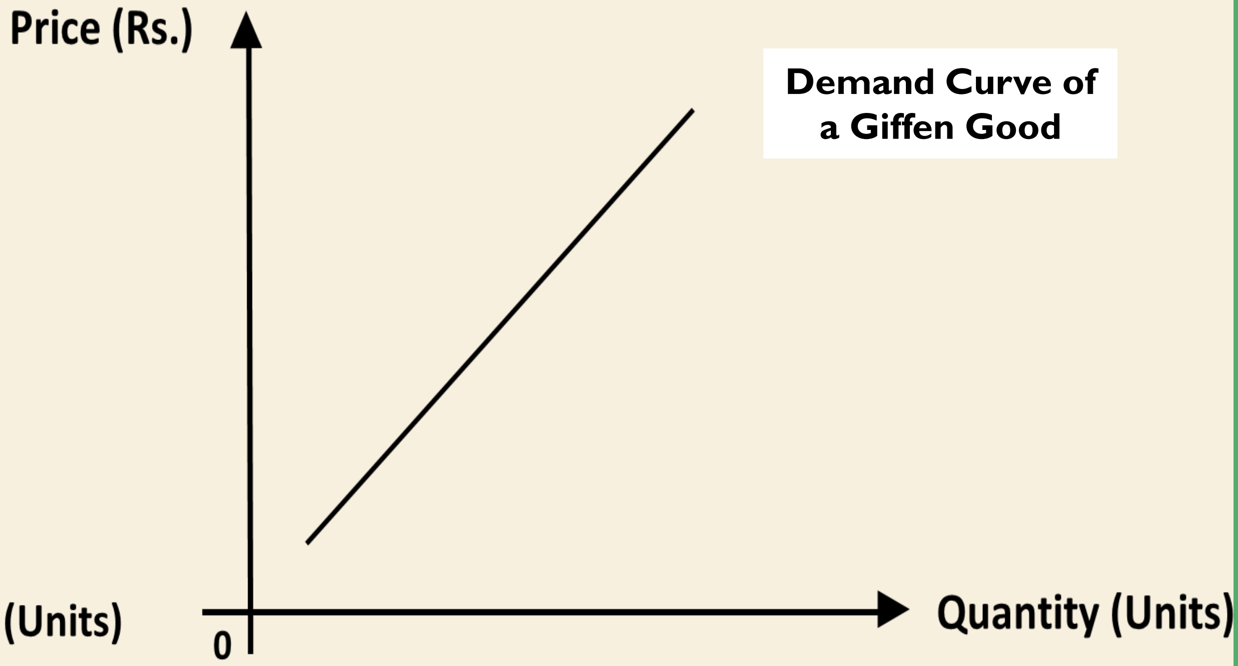
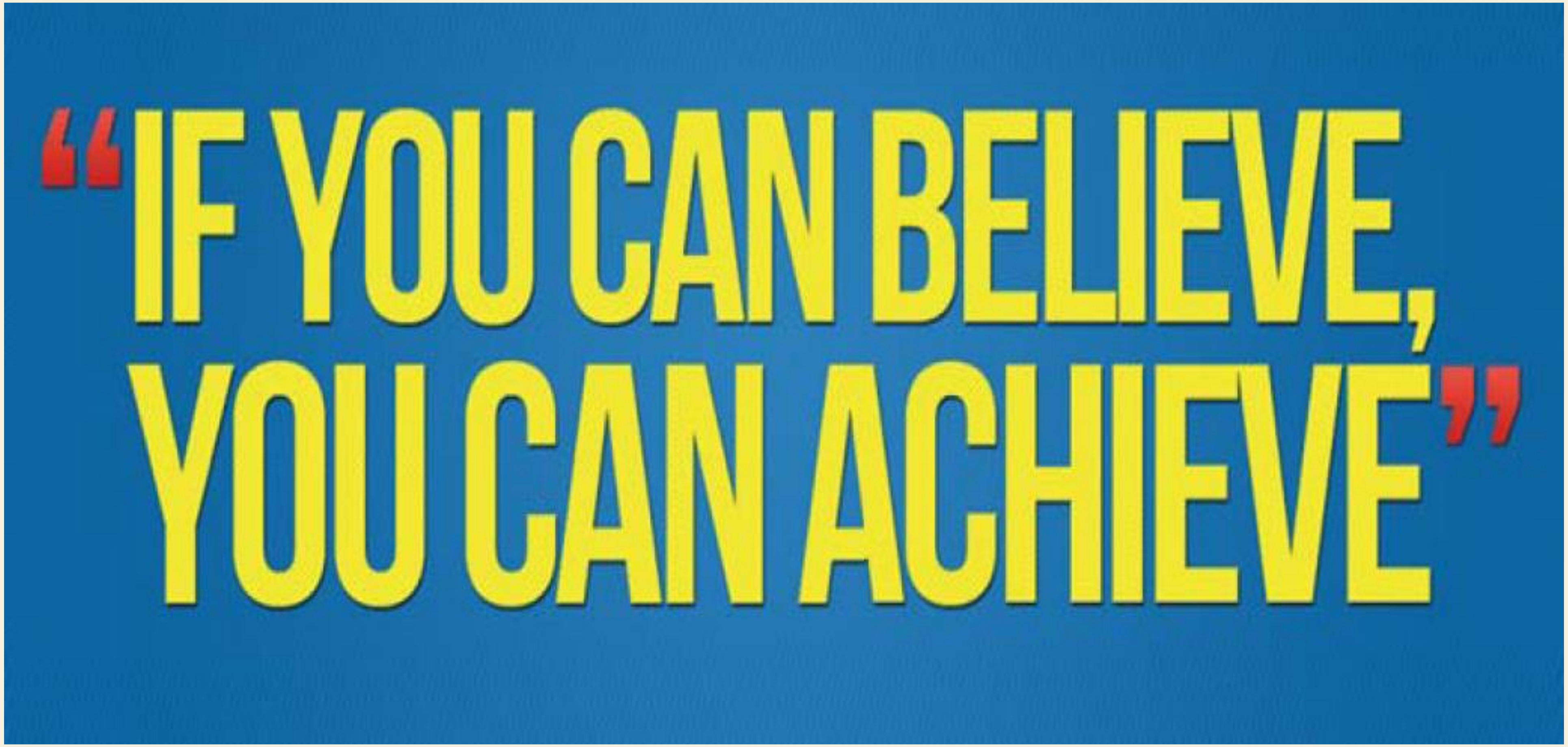
# REPRESENTING A GIFFEN GOODS




"IF YOU CAN BELIEVE,
YOU CAN ACHIEVE"