

**CLUTCH**

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CONCEPT: THE FOUR TYPES OF GOODS AND THEIR CHARACTERISTICS

- We will categorize goods into four categories based on the following two traits:

**Rival in consumption** – Only \_\_\_\_\_ can consume each unit of the good.

Example of a rival good:	Example of a _____ good:
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**Excludable** – a person can be \_\_\_\_\_ from using the good if they did not pay.

Example of an excludable good:	Example of a _____ good:
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- Now, we can define groups of goods based on rivalry and excludability:

	Excludable	Non-excludable
Rival	<u>Private Goods</u> • • •	<u>Common Resources</u> • • •
Non-rival	<u>Club Goods</u> • • •	<u>Public Goods</u> • • •

Note: Club goods might also be called:

- Quasi-public goods
- Natural Monopoly Goods
- Near-public goods
- Non-rival Private Goods
- Artificially Scarce Goods

**PRACTICE:** Label the goods as Private Goods (PRI), Common Resources (CR), Club Goods (CG), or Public Goods (PUB).

Steak Dinner		US Census Data		City Sewer System	
Fireworks Show		Computer Software		Car	
Forest Lumber		Shoes		Wi-Fi	
Traffic Signals		Uncongested Toll Road		Fish in the Ocean	

**PRACTICE:** A slice of pizza is:

- a) Rival
- b) Non-rival
- c) Non-excludable
- d) Both (a) and (c)

**PRACTICE:** An example of an excludable good is:

- a) The court system
- b) Public roads
- c) National Defense
- d) MP3 downloads

**CONCEPT: THE FREE RIDER PROBLEM AND THE TRAGEDY OF THE COMMONS**

- Public Goods will suffer from the **free-rider problem**. Public goods are \_\_\_\_\_ in private market.
  - A **free-rider** is a person who receives the benefit of a good without \_\_\_\_\_.

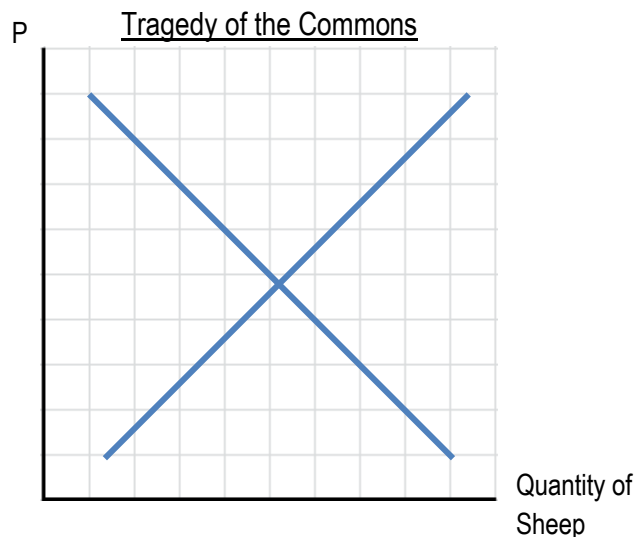
Fireworks Show:  
 Dynamite Bill wants to provide show for \_\_\_\_\_ 100 townsfolk each value show at \_\_\_\_\_  
 100 townsfolk would likely pay \_\_\_\_\_

- Moral of the story → The free-rider problem prevents the \_\_\_\_\_ from supplying public goods. Governments, thus, provide public goods, but only if \_\_\_\_\_.

- Common resources will suffer from the **tragedy of the commons**
  - Common resources tend to be \_\_\_\_\_

"Macdeath" by Brian				
ACT I	ACT II	ACT III	ACT IV	Act V
Johnny Clutch, a shepherd, arrives in Smalltown, a utopia with free common grazing land.	Johnny Clutch grazes his two sheep in the common pasture, earning profit selling his wool.	Hearing of the lucrative wool business, more people move to Smalltown to graze their sheep.	Since so many sheep graze on the common pasture, the field becomes barren.	

- Moral of the story → The tragedy of the commons arises because of an \_\_\_\_\_. We need clearly defined property rights!



**PRACTICE:** Making customers pay per use of a public good is inefficient because:

- a) It results in deadweight loss
- b) MC of the use of the public good once provided is zero
- c) It uses willingness to pay as a measure of preferences
- d) Both (a) and (b)

**PRACTICE:** In the case of a shared pasture, what is the rational strategy of herdsmen acting in their own best interests?

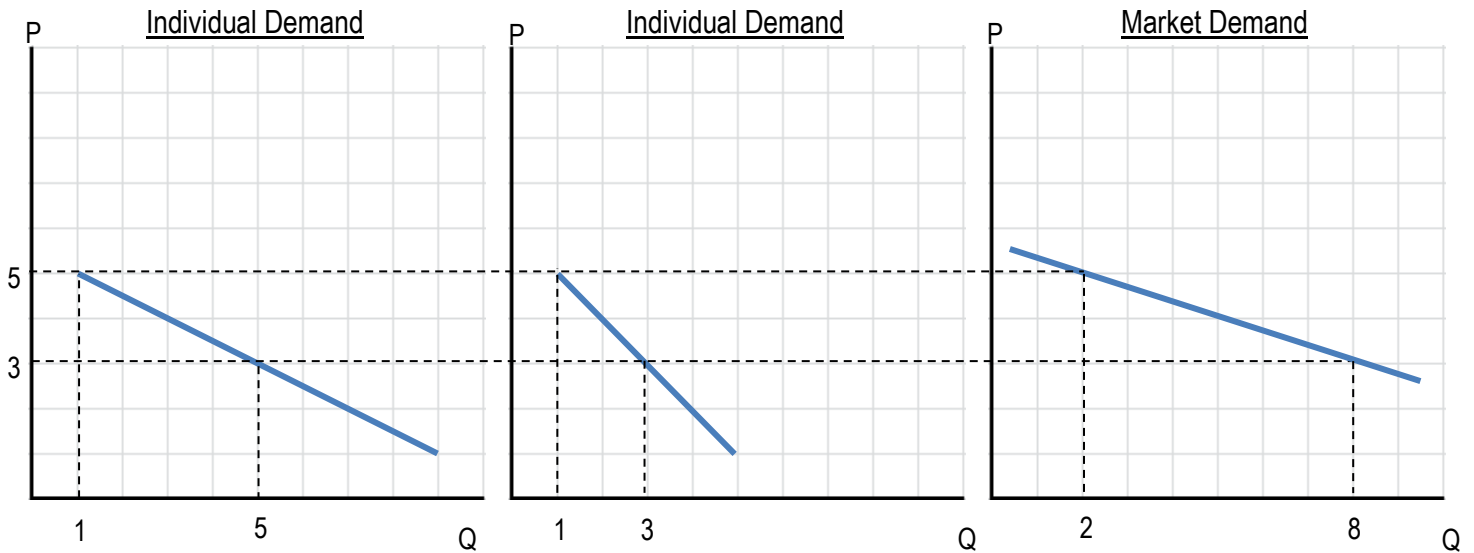
- a) Have fewer cows
- b) Buy more cows
- c) Have the same amount of cows as your neighbor
- d) None of the above

**PRACTICE:** Which of the following environmental issues is not an example of the tragedy of the commons?

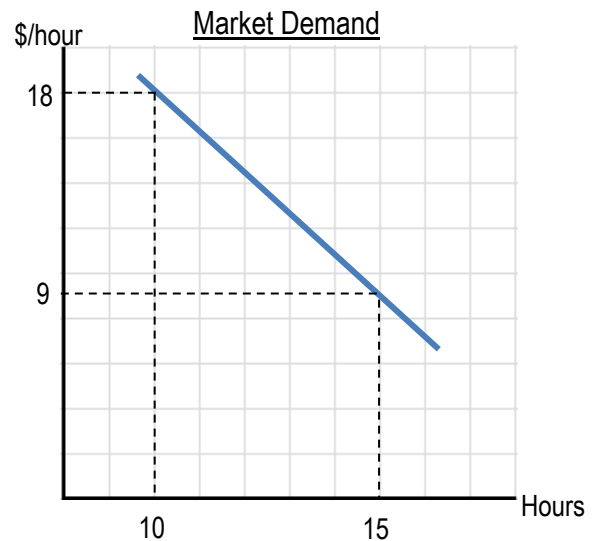
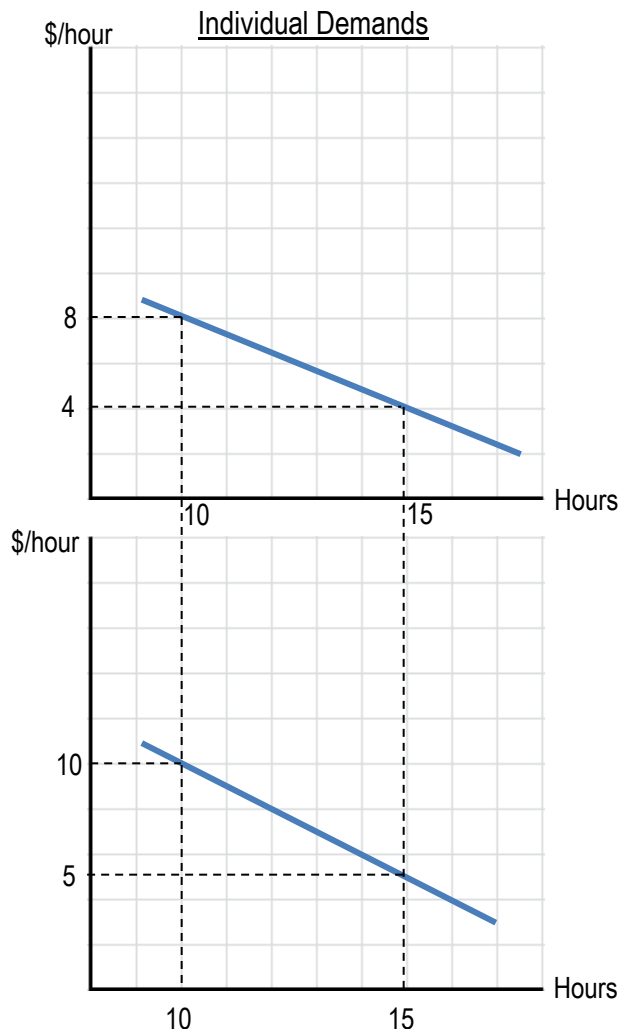
- a) Increased atmospheric carbon dioxide due to burning of fossil fuels
- b) Spread of an invasive species
- c) Depletion of fish stocks in the world's oceans
- d) Deforestation

**CONCEPT: PUBLIC GOOD – DEMAND CURVE AND OPTIMAL QUANTITY**

- To create the demand curve of a **private good**, we add all individual \_\_\_\_\_ at each \_\_\_\_\_.



- To create the demand curve of a **public good**, we add all individual \_\_\_\_\_ at each \_\_\_\_\_.



- The **optimal quantity** of a public good occurs where \_\_\_\_\_.
- The MSB curve is the \_\_\_\_\_ of individual values consumers place on the public good.
- The MSC curve is \_\_\_\_\_ to the supply curve (in the absence of externalities).

**PRACTICE:** The benefit of an additional unit of a public good is:

- a) The highest price someone would pay for it
- b) The lowest price someone would pay for it
- c) The sum of the reservation price of all the people who use it
- d) None of the above

**PRACTICE:** If the benefit of a public good does not exceed its cost:

- a) The government should not provide the public good
- b) The government should provide the public good
- c) The government is indifferent about producing the public good
- d) None of the above

**PRACTICE:** To find the benefit of an additional unit of a public good, we sum the individual demand curves:

- a) Horizontally
- b) Vertically
- c) Diagonally
- d) None of the above

**PRACTICE:** Two roommates plan to spend their evening with a marathon of Saw horror movies. Because it is a marathon, they must start with the first movie in the series and continue in order. Their willingness to pay for the rental of each movie is as follows:

Movie	Ricky	Martin
Saw I	\$9	\$7
Saw II	\$7	\$5
Saw III	\$5	\$3
Saw IV	\$3	\$1

The marginal benefit from renting the third movie is:

- a) \$36
- b) \$8
- c) \$5
- d) \$3

If each movie rental costs \$6, how many movies should they rent?

- a) One movie
- b) Two movies
- c) Three movies
- d) Four movies

**PRACTICE:** Which of the following is not a possible solution to the tragedy of the commons?

- a) Users sharing the work needed to manage the use of the resource
- b) Private ownership
- c) Government regulation
- d) All of the following are possible solutions to the tragedy of the commons.