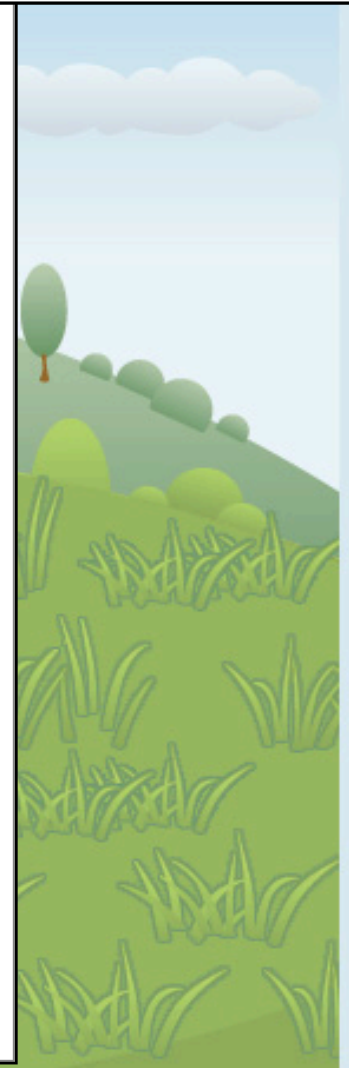
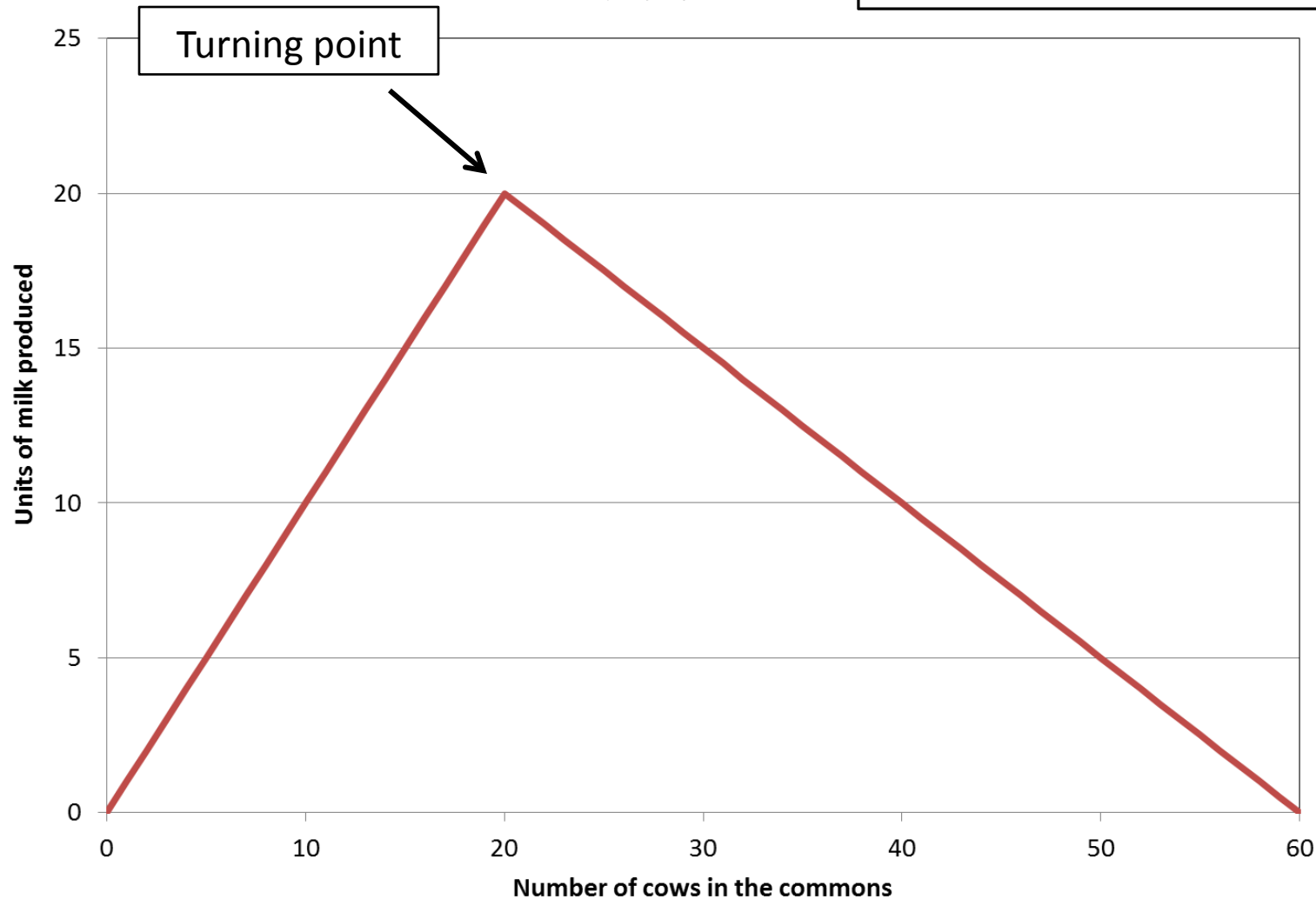


Tragedy of the Commons



$$f(N) = \begin{cases} N & \text{if } 0 \leq N \leq 20 \\ 20 - \frac{N - 20}{2} & \text{if } 20 < N \leq 60 \end{cases}$$

Function 1

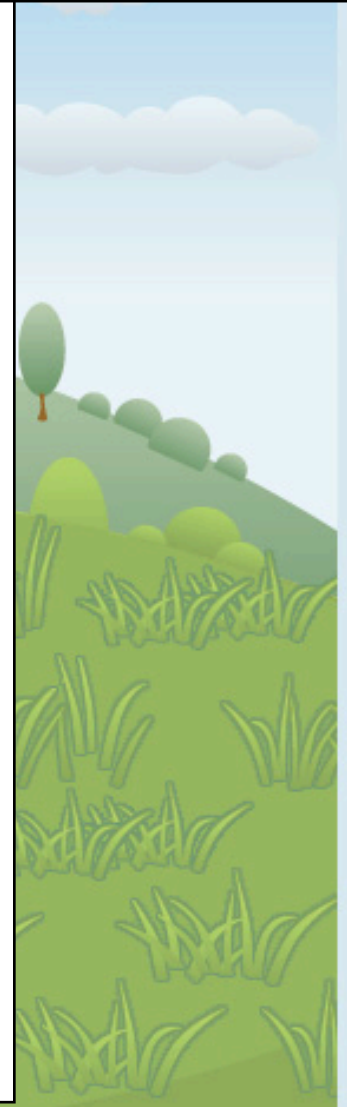
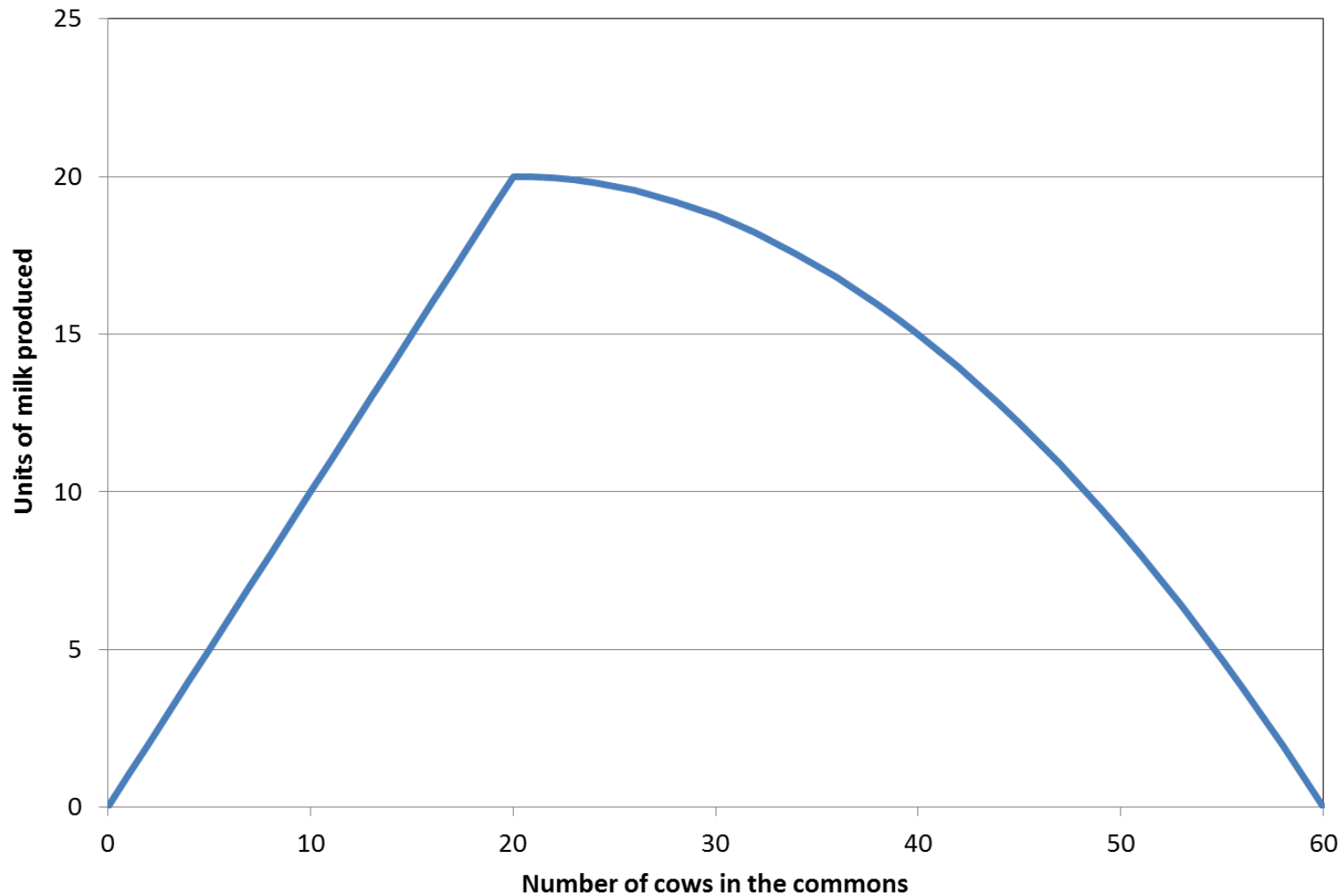


Tragedy of the Commons

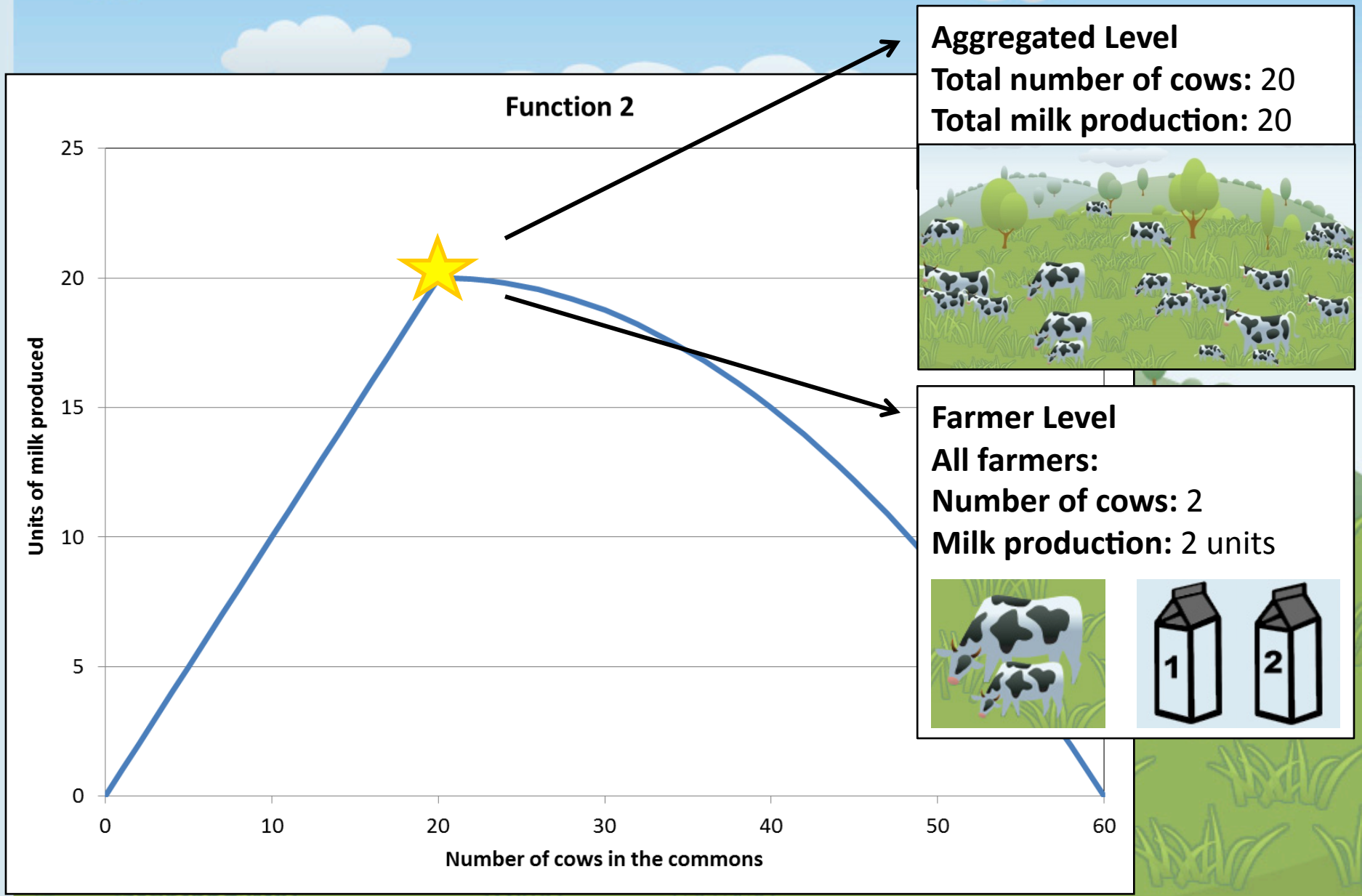


$$f(N) = \begin{cases} N & \text{if } 0 \leq N \leq 20 \\ 20 \left(1 - \frac{(N - 20)^2}{1600} \right) & \text{if } 20 < N \leq 60 \end{cases}$$

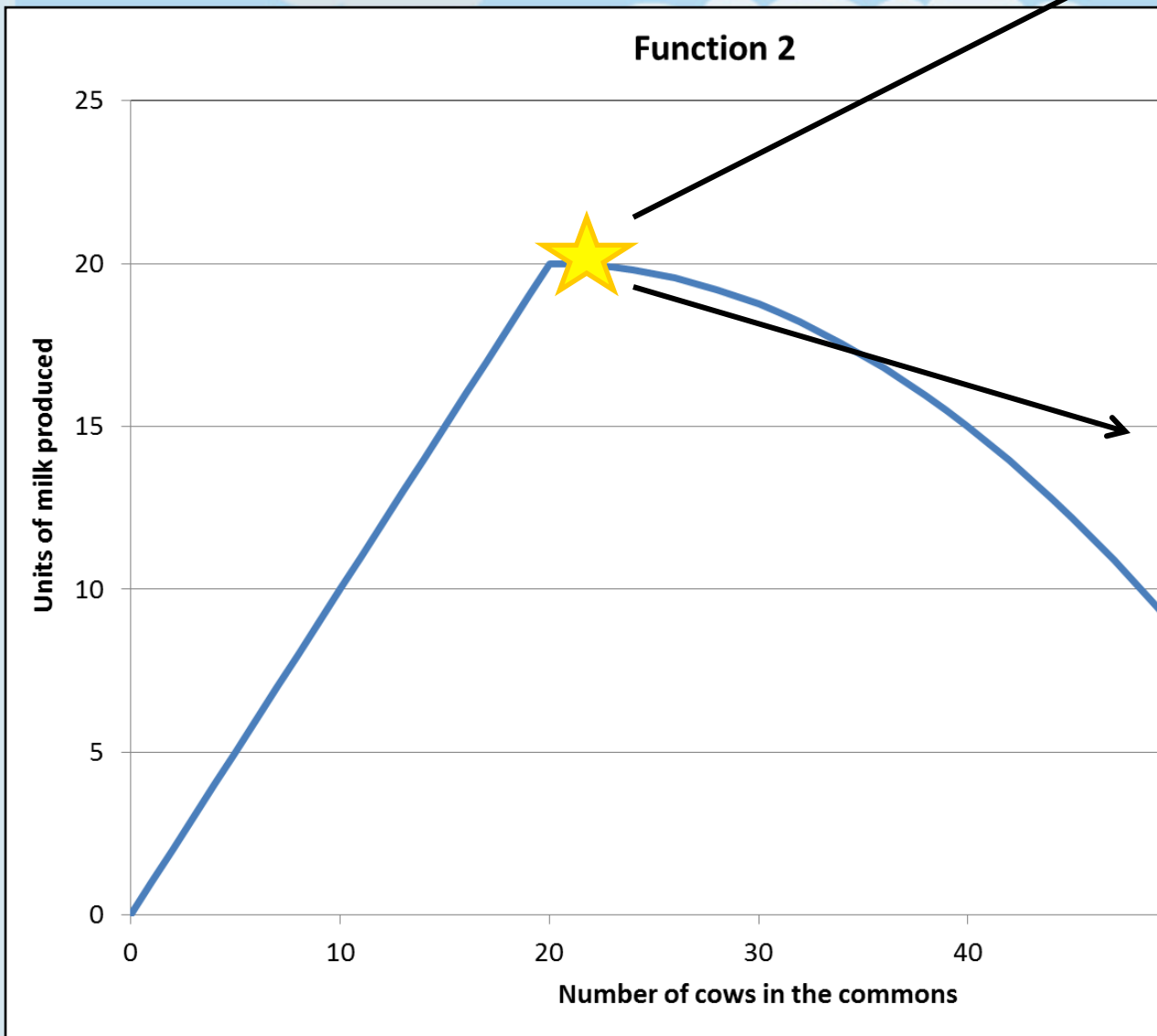
Function 2



Tragedy of the Commons



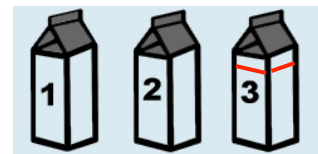
Tragedy of the Commons



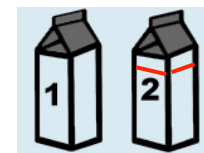
Aggregated Level
Total number of cows: 21
Total milk production: 19.99



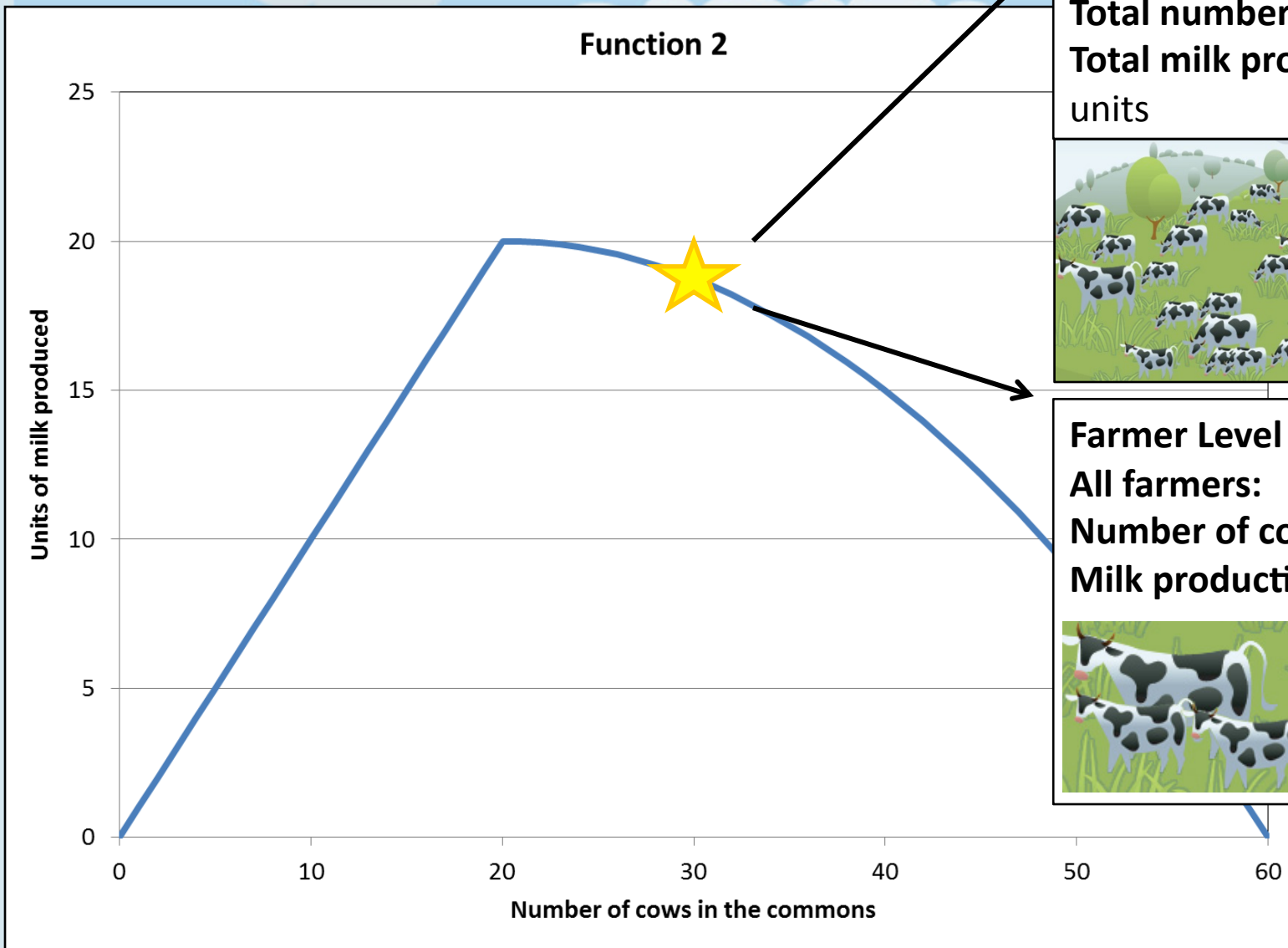
Farmer Level
Farmer 1:
Number of cows: 3
Milk production: 2.86 units



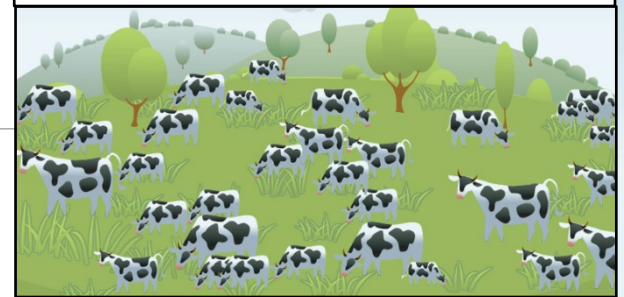
All other farmers:
Number of cows: 2
Milk production: 1.90 units



Tragedy of the Commons



Aggregated Level
Total number of cows: 30
Total milk production: 18.75 units



Farmer Level
All farmers:
Number of cows: 3
Milk production: 1.88 units

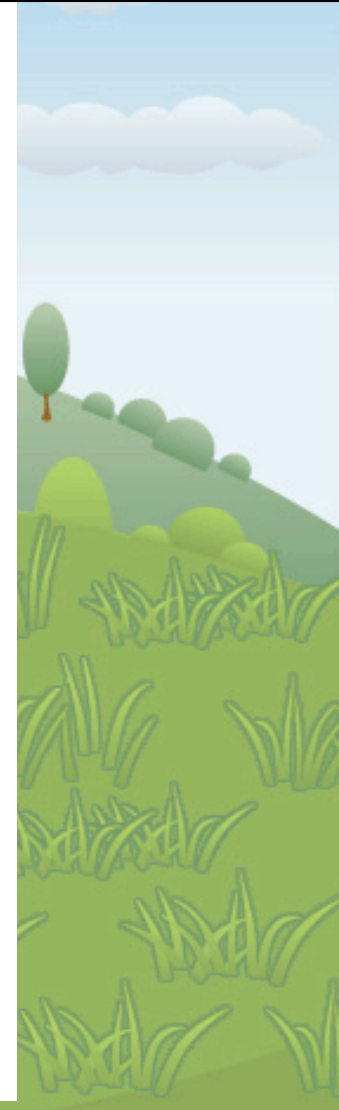
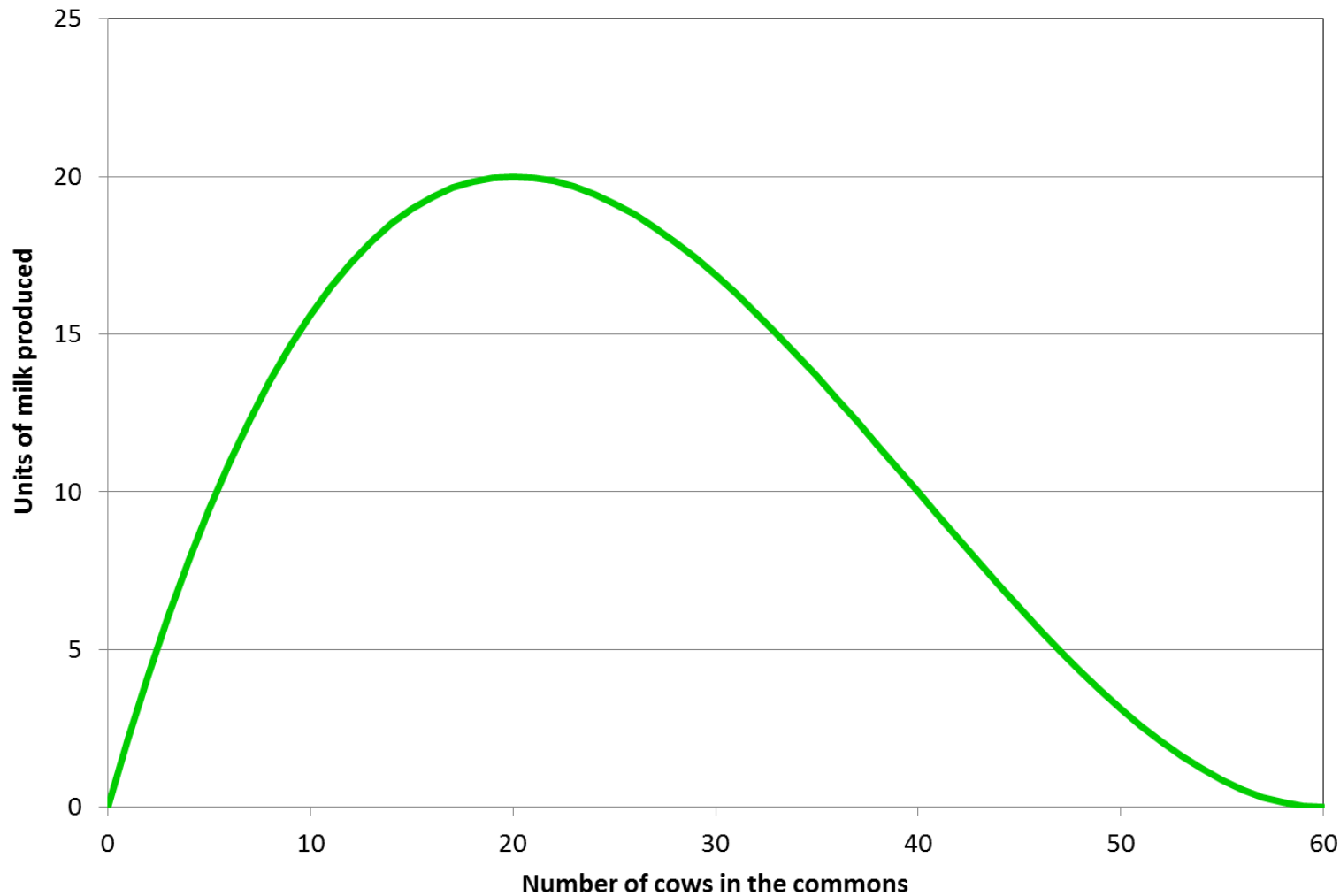


Tragedy of the Commons



$$f(N) = \frac{N}{4} \left(\frac{N^2}{400} - \frac{3N}{10} + 9 \right) \text{ if } 0 \leq N \leq 60$$

Function 3



Tragedy of the Commons



$$f(N) = \begin{cases} N & \text{if } 0 \leq N \leq 20 \\ 20(1 - e^{-0.2(60-N)}) / (1 - e^{-8}) & \text{if } 20 < N \leq 60 \end{cases}$$

Function 4

