set variable (influx of cat pictures) as (usual rate of posting cat pictures) + (likelihood of posting a cat picture) · (number of cats)

set variable (outflow of cat pictures) as (outflow of cat pictures)

set variable (number of cat pictures) as (number of cat pictures) + (influx of cat pictures) - (outflow of cat pictures)

set variable (influx of cats) as (rate of acquiring cats as pets) + (likelihood of adopting a cat after seeing a lot of cat pictures) · (number of cat pictures)

set variable (outflow of cats) as (outflow of cats)

set variable (number of cats) as (number of cats) + (influx of cats) - (outflow of cats)