Sam discovered that the pool in his backyard is leaking slowly. The pool holds 15,684 gallons of water, and is leaking at a rate of 8 gallons per day.

1. Set up an algebraic equation to represent the amount of water that remains if he does not replace it after x days.
2. How many gallons remain in the pool after 35 days?
3. After how many days will the pool be empty?