

### For the uninitiated

- You have a town
- You can upgrade that town's resources with gold or elixir
- You can mine gold or elixir
- Or you can steal it by attacking others



### Upgrades & Gold

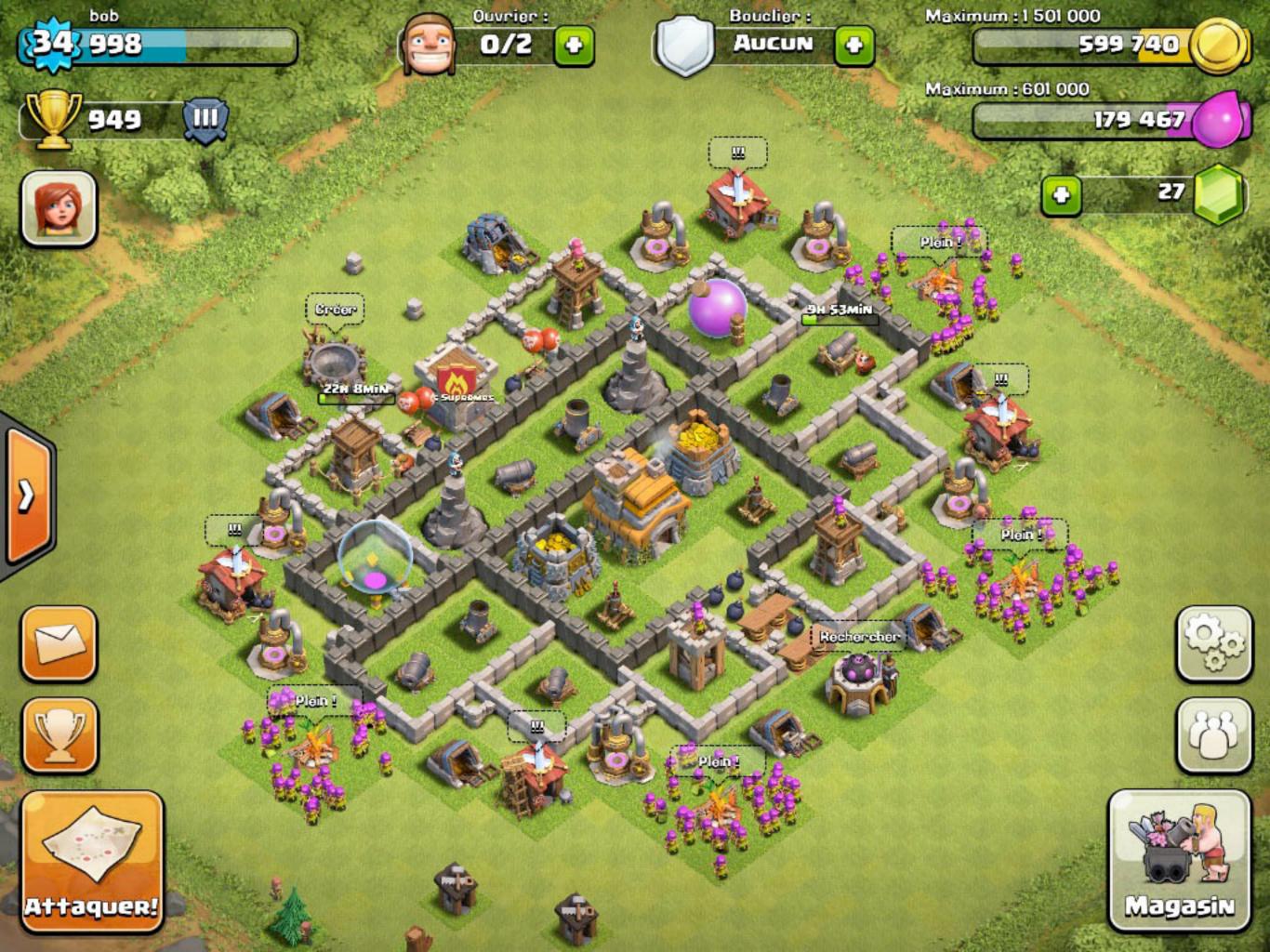
- You can upgrade resources like walls with gold.
- Gold can be found in two main ways
  - You can mine it
  - You can buy it for real cash with gems





# The evolution of a town

Write down the first question that springs to mind









### Talk to your neighbour

Same question? Which is more interesting? Maybe you have a new question?



What do you estimate it costs in real money to upgrade all your walls to Level 11?

# What do we need to know to find out the real answer?

### Your challenge

Work in groups to find the answer The information sheets might help

Extension:

How long would it take without gems?

### One solution

#### Step 1

Find out how much gold needed in total to build all the walls

#### Step 2

Find out how many gems needed to buy all that gold

#### Step 3

Find out how many gem packs needed to buy those gems

#### Step 4

Find out how much those gem packs would cost

### Step 1: How much gold?

- 250 walls in total
- How much does it cost to fully upgrade one wall?
  - Level 1 (200) + Level 2 (1,200) + Level 3 (6,200) + ...
  - Full upgrade = **8,821,200** gold
- Cost to upgrade 250 walls = 250 x 8,821,200

### 2,205,300,000 gold

to get all walls to Level 11

### Step 2: How many gems?

- Each top level storage resource can hold 2 million in gold
- We need **2,205,300,000** ÷ **2,000,000** storages
  - i.e. **1102.65** storages
- Each of these storages costs 615 gems a fill
- So we need 1102.65 x 615 gems in total

### 678,129.75 gems

needed to get enough gold for all walls to be Level 11

### Step 3: How many packs?

- We need 678,129.75 gems
- The most gems we can buy in a pack is 14,000
- So we need 678,129.75 ÷ 14,000 packs

### 48.43 gem packs

need to be bought to get all walls to Level 11

### Step 4: How much cash?

- We need to buy 48.43 packs
- At £69.99 a pack
- So we need to spend:
  - 48.43 x £69.99

### Total cost: £3,390.16

needs to be spent to get all walls to Level 11

## How does that compare to our estimates?