

Family Trees

You need: a calculator (optional)

ACTIVITY

Nina is tracing her family tree. (This is called genealogy.) She decides to think about each generation as a power of 2. She starts with her parents (2^1), whom she calls the first generation.



Two parents:	2^1
Four grandparents:	2^2
Eight great-grandparents:	2^3

- After she has researched her great-grandparents, how many people has she researched in total?
- Nina has now gone back 75 years (three generations).
 - If a new generation occurs every 25 years, how many generations in total will she have researched if she goes back a further 100 years?
 - How many great-great-great-great-great-grandparents will she be researching?
 - Express this as a power of 2.
 - How many people will she have researched now?
- By which generation will she have researched just over 1 000 people in total?
- After finding everyone from a period of 475 years, Nina has researched 19 generations.
 - How many people are there in the 19th generation?
 - How many people has she researched in total?