

There is an alien race known as the Calculons. These are beings with perfect mathematical skills and can do any calculation without the aid of machines. However, they do not know anything about our culture and conventions and need help to solve the following problems. Do not solve these problems, but outline the information you will need to know and what operation you will be doing to solve.

- 1) How many words are contained in 4.8 copies of *The Hunger Games*?
- 2) How many days are there in 2.65 Septembers?
- 3) 48 young pop stars make up how many versions of the Backstreet Boys?
- 4) 3000 Calories is equal to how many Big Mac sandwiches?
- 5) How many Bill Gateses would it take to equal the 2019 GDP of the Netherlands (hint: use his net worth)
- 6) Number of piano keys you need if you make 6 pianos and someone has already placed half the keys on one piano

Mole practice

- 1) Grams in 1.0 mole of water
- 2) Moles in 12.0 grams of helium
- 3) Grams in 2.65 moles of sodium chloride
- 4) Moles in 300.0 grams of ammonia

Practice: Khan academy practice problems

<https://www.khanacademy.org/science/chemistry/chemical-reactions-stoichiome/stoichiometry-ideal/e/converting-moles-and-mass>