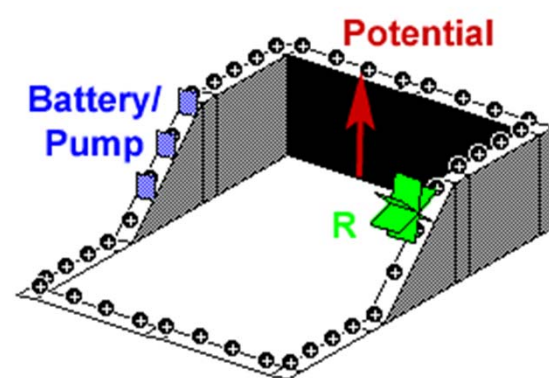


4-1: Create a lively visual metaphor or analogy

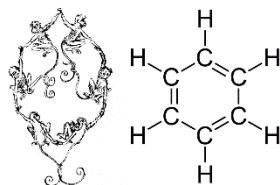
Two decorative swirls are positioned to the right of the title. The top swirl is green and the bottom swirl is orange. Both swirls have a small arrowhead at their ends, pointing towards the right.

By Barbara Oakley, PhD

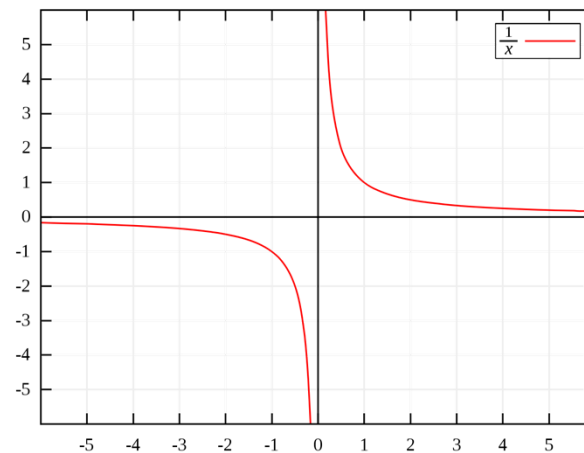
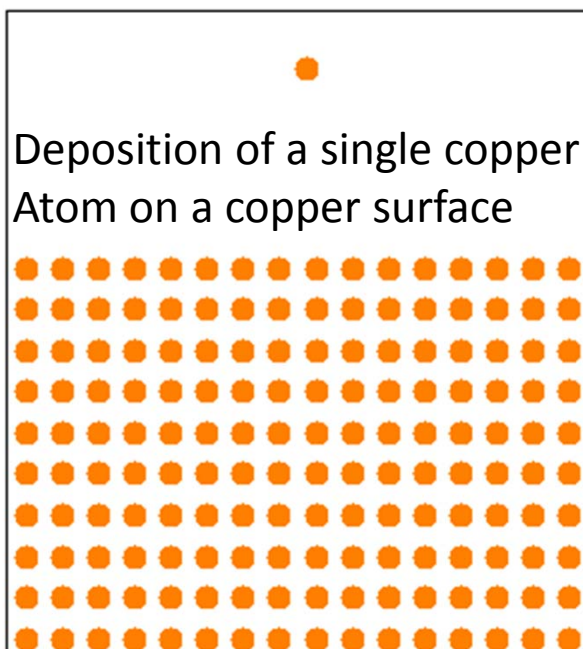




Allegory of Music, by Filippino Lippi



time 0.0041 ps

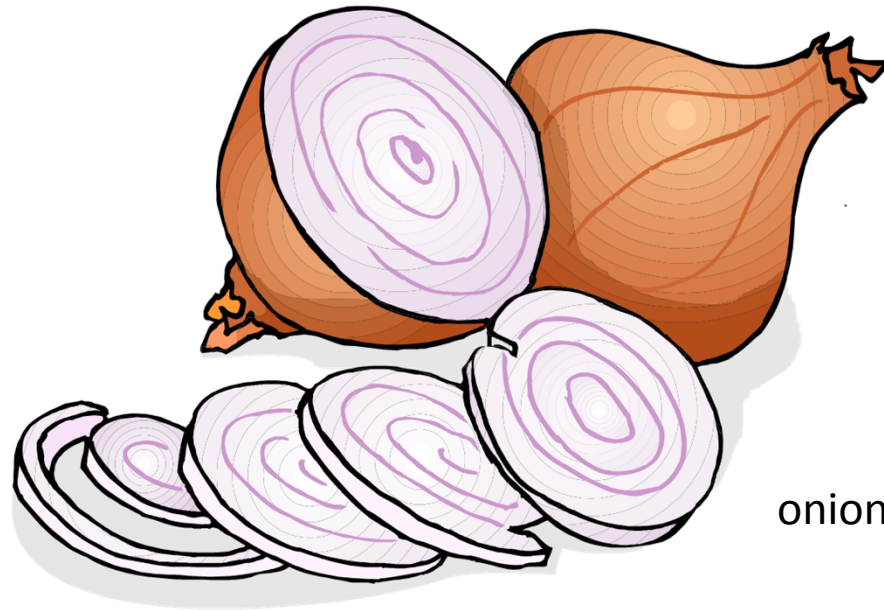


cation



Paws = “paws”itive

anion = negative



onion



تحت

Illustration credits

- Ribbons of memory ©Barbara Oakley, 2014.
- Syria, by the UN Office for the Coordination of Humanitarian Affairs (OCHA)
[http://commons.wikimedia.org/wiki/File:Syria_-_Location_Map_\(2013\)_-_SYR_-_UNOCHA.svg](http://commons.wikimedia.org/wiki/File:Syria_-_Location_Map_(2013)_-_SYR_-_UNOCHA.svg)
- Allegory of Music by Filippino Lippi, (between 1475 and 1500),
http://en.wikipedia.org/wiki/Allegory#mediaviewer/File:Filippino_Lippi_001.jpg
- http://en.wikipedia.org/wiki/Molecular_dynamics, Example of a molecular dynamics simulation in a simple system: deposition of a single Cu atom on a Cu (001) surface. Each circle illustrates the position of a single atom; note that the actual atomic interactions used in current simulations are more complex than those of 2-dimensional hard spheres.
- Monkeys in a ring, from Berichte der Durstigen Chemischen Gesellschaft (1886), p. 3536; benzene ring, modified from <http://en.wikipedia.org/wiki/File:Benzene-2D-full.svg>
- Water flow analogy for electrical current by Professor Richard Vawter,
<http://faculty.wvu.edu/vawter/PhysicsNet/Topics/DC-Current/WaterFlowAnalog.html>.
- Hyperbola $1/x$ http://en.wikipedia.org/wiki/Division_by_zero#mediaviewer/File:Hyperbola_one_over_x.svg.
- Fortification, from the 1728 Cyclopaedia,
http://en.wikipedia.org/wiki/Fortification#mediaviewer/File:Table_of_Fortification,_Cyclopaedia,_Volume_1.jpg
- Linear Accelerator Used for External-beam Radiation Therapy, National Cancer Institute,
<http://www.cancer.gov/cancertopics/factsheet/Therapy/radiation>
- Clip art courtesy Microsoft Corporation

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