

Atomic structure

Before you answer the puzzle below fill in the table of isotopes:

isotope	number of protons	neutrons	electrons
$^{19}_9\text{F}$			
$^{35}_{17}\text{Cl}$			2,8,7
^2_1H			
^7_3Li			

Puzzle 1

Each row, column and 2 x 2 box contains information about each of the isotopes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

isotope		number of protons	
$^{35}_{17}\text{Cl}$			
		3	
		2,7	
	1		
	neutrons	electrons	

gridlocks – can you unlock the grid?

Puzzle 2

Each row, column and 2 x 2 box contains information about each of the isotopes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

isotope		number of protons	
	$^{19}_9\text{F}$		3
			9
17			1
number of protons		neutrons	

Puzzle 3

This puzzle is based on 4 different elements; you will have to work out what they are.

element		number of protons	
O			6
	2		2,8,1
number of protons		electrons	

Atomic structure – answers

Before you answer the puzzle below fill in the table of isotopes:

isotope	number of protons	neutrons	electrons
$^{19}_9\text{F}$	9	10	2,7
$^{35}_{17}\text{Cl}$	17	18	2,8,7
^2_1H	1	1	1
^7_3Li	3	4	2,1

Puzzle 1 – answers

Each row, column and 2 x 2 box contains information about each of the isotopes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

isotope		number of protons	
$^{35}_{17}\text{Cl}$	^7_3Li	1	9
^2_1H	$^{19}_9\text{F}$	3	17
4	18	2,7	1
10	1	2,8,7	2,1
neutrons		electrons	

gridlocks – can you unlock the grid?

Puzzle 2 – answers

Each row, column and 2 x 2 box contains information about each of the isotopes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

isotope		number of protons	
${}^2_1\text{H}$	${}^{19}_9\text{F}$	17	3
${}^7_3\text{Li}$	${}^{35}_{17}\text{Cl}$	1	9
9	1	4	18
17	3	10	1
number of protons		neutrons	

Puzzle 3 – answers

This puzzle is based on 4 different elements; you will have to work out what they are.

element		number of protons	
O	Na	2	6
He	C	11	8
6	2	2,6	2,8,1
11	8	2,4	2
number of protons		electrons	