gridlocks – can you unlock the grid?

Concentration of solutions 2

Before you answer the puzzles below fill in the table of concentrations in mol/dm^3 using:

$$concentration = \frac{\text{moles}}{\text{volume (in dm}^3)}$$

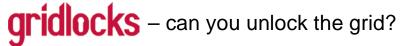| moles	concentration of solution in mol/cm³ when given number of moles is:			
	dissolved in 1000 cm³	dissolved in 250 cm³	dissolved in 500 cm³	dissolved in 100 cm³
1	1			
2			4	
0.5		2		
0.4			0.8	
0.1				1

Gridlock 1

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.5 and 0.1 moles are dissolved in the various volumes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

in 100 cm³		in 250 cm³	
	4		0.4
			1.6
0.4			0.5
in 500 cm³		in 1000 cm³	

Gridlock 2

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.5 and 0.1 moles are dissolved in the various volumes.

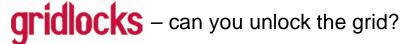| in 100 cm³		in 250 cm³	
2			1.6
			0.1
1			
in 500 cm³		in 1000 cm³	

Gridlock 3

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.8 and 0.05 moles are dissolved in the various volumes.

in 100 cm³		in 250 cm³	
2			1.6
	1.6		0.05
in 500 cm³		in 1000 cm³	

gridlocks – can you unlock the grid?

Concentration of solutions 2 – answers

Before you answer the puzzles below fill in the table of concentrations in mol/dm³ using:

$$\text{concentration} = \frac{\text{moles}}{\text{volume (in dm}^3)}$$

moles	concentration of solution in mol/cm³ when given number of moles is:			
	dissolved in 1000 cm³	dissolved in 250 cm³	dissolved in 500 cm³	dissolved in 100 cm³
1	1	4	2	10
2	2	8	4	20
0.5	0.5	2	1	5
0.4	0.4	1.6	0.8	4
0.1	0.1	0.4	0.2	1

Puzzle 1 – answers

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.5 and 0.1 moles are dissolved in the various volumes. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

in 100 cm³		in 250 cm³	
5	4	0.8	0.4
1	2	2	1.6
0.8	1	0.1	0.2
0.4	0.2	0.4	0.5
in 500 cm³		in 1000 cm³	

Puzzle 2 – answers

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.5 and 0.1 moles are dissolved in the various volumes.

in 100 cm^3		in 250 cm^3	
2	5	0.4	1.6
1	4	0.8	2
0.8	0.4	0.5	0.1
1	0.2	0.4	0.2
in 500 cm^3		in 1000 cm^3	

Puzzle 3 – answers

Each row, column and 2 x 2 box contains concentrations when 0.4, 0.2, 0.8 and 0.05 moles are dissolved in the various volumes.

in 100 cm^3		in 250 cm^3	
2	0.5	3.2	1.6
8	4	0.2	0.8
0.8	1.6	0.2	0.05
0.1	0.4	0.4	0.8
in 500 cm^3		in 1000 cm^3	