

## The Periodic Table: answers

The table gives the electronic configuration of consecutive elements in each of two groups (**A** and **B**) of the Periodic Table.

Group A		Group B	
Element	Configuration	Element	Configuration
T	$1s^2 2s^1$	X	$1s^2 2s^2 2p^4$
V	$1s^2 2s^2 2p^6 3s^1$	Y	
W		Z	$1s^1 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4$

- a) In which group of the Periodic Table are:
  - a. T, V and W
  - b. X, Y and Z?
- b) Write down the electron configuration of:
  - a. W
  - b. Y
- c) For the electron in  $3s^1$ , what is meant by "3", "s" and "1"?

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Ⓐ T, V & W ⇒ group:  $s^1$  / 1 / 1A / alkali metals  
 X, Y & Z ⇒ group:  $s^2 p^4$  / 16 / 6A

Ⓑ W:  $1s^2 2s^2 2p^6 3s^2 3p^6$   $4s^1$   
 Y:  $1s^2 2s^2 2p^6$   $3s^2 3p^4$

Ⓒ

3 s 1

↑     ↗

electron level     type of orbit

←

number of electrons