

- 3 a Complete the table below to show the subatomic particles present in these atoms.

| Element | Protons | Neutrons | Electrons | Nucleon number |
|---------|---------|----------|-----------|----------------|
| Li      |         | 4        |           | 7              |
| Na      |         |          | 11        | 23             |
| P       | 15      |          |           | 31             |
| Pb      |         |          | 82        | 207            |

- b Chlorine atoms come in two forms:  $^{35}_{17}\text{Cl}$  and  $^{37}_{17}\text{Cl}$ .

- i How do you know that they are both atoms of the same element?

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- ii What is the difference between the two types, or isotopes, of chlorine?

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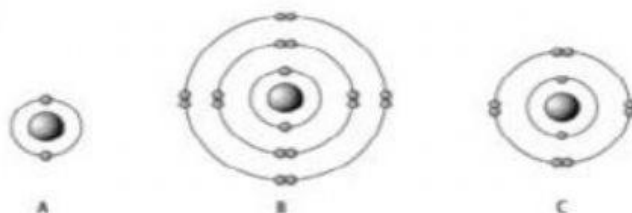
- iii Which element is  $^{14}_6\text{X}$  an isotope of?

$^{12}_6\text{C}$        $^{13}_7\text{C}$

Explain your answer.

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- a Diagrams A, B and C represent the atoms of three elements. Name the elements.

A..... B..... C.....

- b These elements are all very unreactive gases. What can be said about the electron arrangements of these atoms?

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