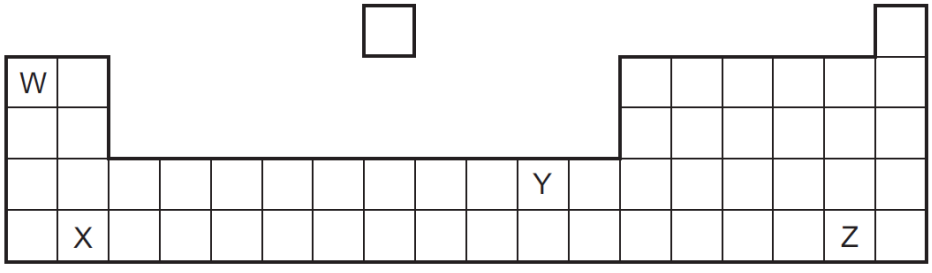
The Periodic Table – 2019 June

1. 0620/11,12,13,21,22,23/M/J/19/No.17,18

The positions of elements W, X, Y and Z in the Periodic Table are shown.



Which elements form basic oxides?

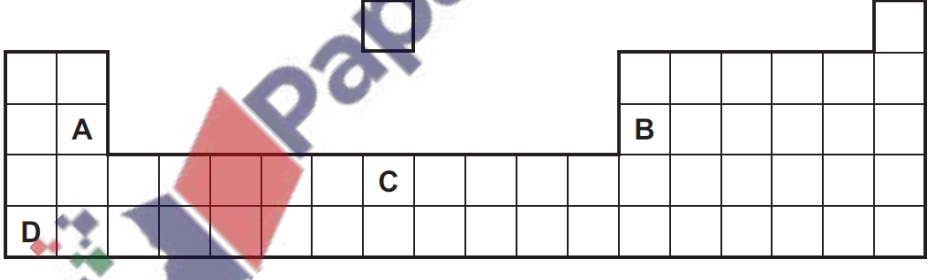
A W, X and Y **B** W and X only **C** Y only **D** Z only

2. 0620/11/M/J/19/No.20

The properties of an element are shown.

electrical conductivity	density	reaction with water
high	low	reacts violently with cold water

Which element has these properties?



3. 0620/11/M/J/19/No.21

Which statement about elements in Group I and Group VII of the Periodic Table is correct?

A Bromine reacts with potassium chloride to produce chlorine.

B Iodine is a monoatomic non-metal.

C Lithium has a higher melting point than potassium.

D Sodium is more reactive with water than potassium.

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4. 0620/11/M/J/19/No.22

Which row describes the properties of a transition element?

	melting point	density	forms coloured compounds
A	high	low	no
B	high	high	yes
C	low	low	no
D	low	low	yes

5. 0620/11/M/J/19/No.23

Which statement about elements in Group VIII of the Periodic Table is correct?

A They all have a full outer shell of electrons.

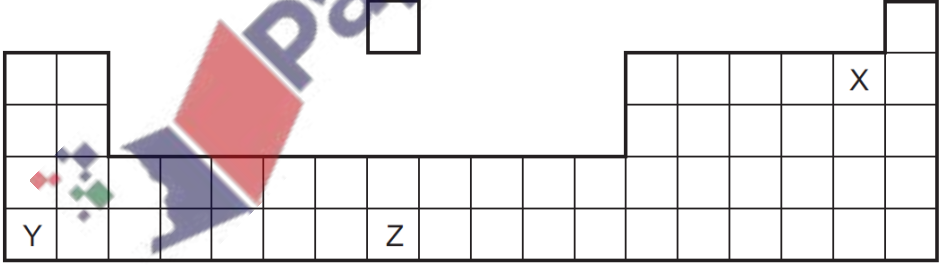
B They all react with Group I elements to form ionic compounds.

C They are all diatomic molecules.

D They are all liquids at room temperature.

6. 0620/12/M/J/19/No.20

Part of the Periodic Table is shown.



Which row describes the properties of X, Y and Z?

	good conductor of electricity	high melting point
A	X	Z
B	Y	Z and X
C	Y and Z	Z
D	Z and X	X

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7. 0620/12/M/J/19/No.21

The melting points and boiling points of the elements of Group I of the Periodic Table are shown.

element	melting point / °C	boiling point / °C
lithium	181	1330
sodium	98	883
potassium	63	759
rubidium	39	688
caesium	28	671

Which pair of elements are liquid at 800 °C?

A caesium and rubidium

B potassium and sodium

C lithium and sodium

D potassium and caesium

8. 0620/12/M/J/19/No.22

The table gives some information about four metals, Q, R, S and T.

	melting point in °C	density in g / dm^3	colour of metal sulfate	catalytic activity
Q	650	1.74	white	no
R	1455		green	
S	842	1.55	white	no
T	1085	8.96		yes

Which statements are correct?

1 T forms a coloured sulfate.

2 Q and S are transition elements.

3 The density of R is 0.53 g / cm^3.

4 R shows catalytic activity.

A 1 and 3 **B** 1 and 4 **C** 2 and 3 **D** 2 and 4

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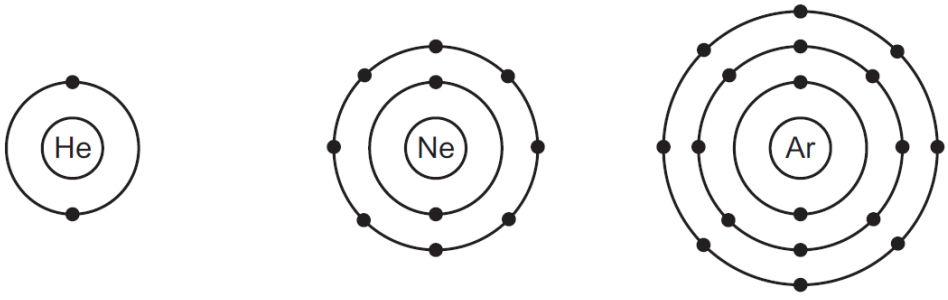
9. 0620/12/M/J/19/No.23

The electronic structures of helium, neon and argon are shown.

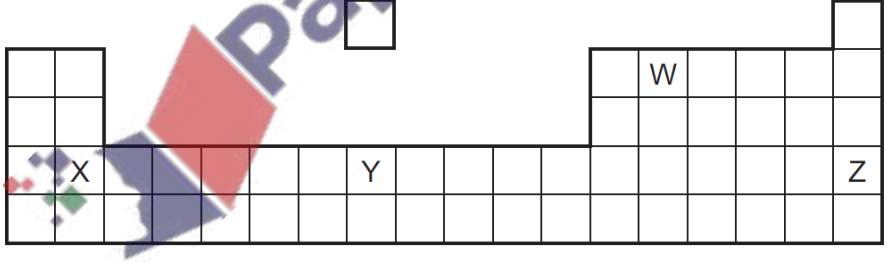


Which row describes these gases?

	reactivity	form of the gas	electronic structure
A	reactive	monoatomic	incomplete outer shell of electrons
B	unreactive	diatomic	complete outer shell of electrons
C	unreactive	diatomic	incomplete outer shell of electrons
D	unreactive	monoatomic	complete outer shell of electrons

10. 0620/13,23/M/J/19/No.20

Part of the Periodic Table is shown.



Which row describes W, X, Y and Z?

	metal	non-metal
A	X	W, Y and Z
B	X and Y	W and Z
C	W and Z	X and Y
D	W, Y and Z	X

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11. 0620/13/M/J/19/No.21

Which statement about the properties of elements in Group I and in Group VII is correct?

A Bromine displaces iodine from an aqueous solution of potassium iodide.

B Chlorine, bromine and iodine are diatomic gases at room temperature.

C Lithium, sodium and potassium are soft non-metals.

D Lithium, sodium and potassium have an increasing number of electrons in their outer shells.

12. 0620/13/M/J/19/No.22

Some information about four elements, P, Q, R and S, is shown.

	melting point in °C	density in g/cm^3	colour of chloride
P	1247	7.43	pink
Q	1410	2.33	white
R	1910	6.11	purple
S	115	2.07	red

Which elements are transition elements?

A P and R **B** P and S **C** Q and R **D** R and S

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13. 0620/13/M/J/19/No.22

Gas G has 10 electrons. Gas H has eight more electrons than gas G. Both gases are monoatomic.

Which statement about G and H is correct?

A Both gases are in the same group of the Periodic Table.

B Both gases are in the same period of the Periodic Table.

C Both gases are very reactive.

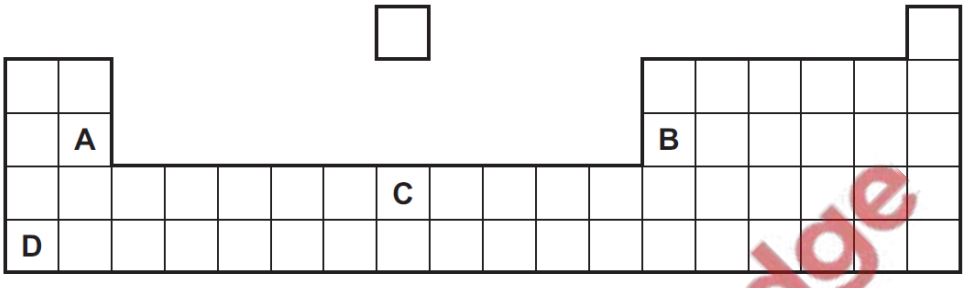
D Gas G has a higher atomic mass than gas H.

14. 0620/21/M/J/19/No.20

The properties of an element are shown.

electrical conductivity	density	reaction with water
high	low	reacts violently with cold water

Which element has these properties?



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Which statement about elements in Group VIII of the Periodic Table is correct?

A They all have a full outer shell of electrons.

B They all react with Group I elements to form ionic compounds.

C They are all diatomic molecules.

D They are all liquids at room temperature.

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17. 0620/22/M/J/19/No.20

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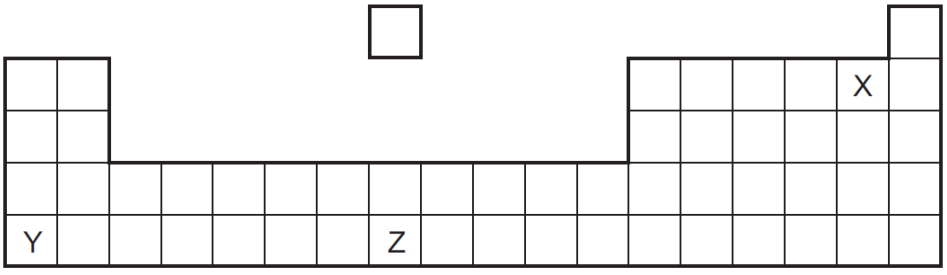

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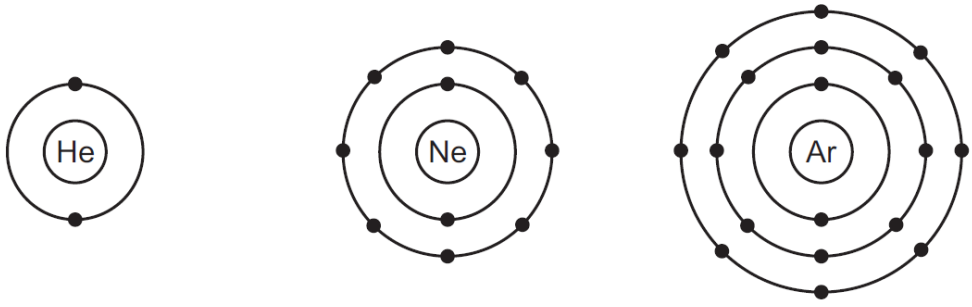

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C Both gases are very reactive.

D Gas G has a higher atomic mass than gas H.

22. 0620/12,22/F/M/19/No.20,24

The elements sodium to argon form Period 3 of the Periodic Table.

Which row describes the trend across Period 3 from left to right?

	number of outer shell electrons	metallic character	group number
A	decreases	decreases	decreases
B	decreases	increases	decreases
C	increases	decreases	increases
D	increases	increases	increases

23. 0620/12,22/F/M/19/No.21,25

Astatine is below iodine in Group VII in the Periodic Table.

Which row describes the properties of astatine?

	state at room temperature	reactivity
A	gas	displaces chlorine, bromine and iodine
B	gas	displaces iodine but does not displace chlorine or bromine
C	solid	displaces iodine but does not displace chlorine or bromine
D	solid	does not displace chlorine, bromine or iodine

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24. 0620/12/F/M/19/No.22

Which row describes a transition element?

	density in g/cm^3	colour of chloride
A	0.98	green
B	0.98	white
C	8.90	green
D	8.90	white

25. 0620/12,22/F/M/19/No.23,26

Which statement explains why elements in Group VIII of the Periodic Table are unreactive?

A They are monatomic gases.

B They form stable diatomic molecules.

C They have a full outer shell of electrons.

D They share electrons with each other.

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