10.2 Reactivity series

01. 0620_m21_qp_22 Q: 24

The metal beryllium does not react with cold water.

It reacts with hydrochloric acid but cannot be extracted from its ore by using carbon.

Where is beryllium placed in the reactivity series?

magnesium
A
zinc
B
iron
C
copper
D

---

02. 0620_m21_qp_22 Q: 27

Which row describes the reactions of magnesium hydroxide and magnesium oxide?

	effect of heat on hydroxide	effect of heating oxide with carbon
A	forms magnesium oxide	magnesium and carbon dioxide formed
B	forms magnesium oxide	no reaction
C	no reaction	magnesium and carbon dioxide formed
D	no reaction	no reaction

---

03. 0620_s21_qp_21 Q: 25

Some properties of metal J are listed.

- J does not react with cold water.
- J reacts with dilute hydrochloric acid.
- No reaction occurs when the oxide of J is heated with carbon.

What is J?

A copper

B iron

C magnesium

D sodium

---

04. 0620_s21_qp_21 Q: 26

Some metal nitrates and carbonates decompose when heated strongly.

Metal Q has a nitrate that decomposes to give a salt and a colourless gas only.

The carbonate of metal Q does not decompose when heated with a Bunsen burner.

What is metal Q?

A calcium

B copper

C sodium

D zinc

05. 0620_s21_qp_22 Q: 25

A piece of aluminium is dropped into dilute hydrochloric acid.

No immediate reaction is observed.

Which statement explains this observation?

A Aluminium does not neutralise acids.

B Aluminium is a non-metal so does not react with acids.

C Aluminium is below hydrogen in the reactivity series.

D Aluminium is covered in an unreactive oxide layer.

---

06. 0620_s21_qp_22 Q: 26

Some metal nitrates and carbonates decompose when heated strongly.

Metal Q has a nitrate that decomposes to give a salt and a colourless gas only.

The carbonate of metal Q does not decompose when heated with a Bunsen burner.

What is metal Q?

A calcium

B copper

C sodium

D zinc

---

07. 0620_s21_qp_23 Q: 25

Some metal nitrates and carbonates decompose when heated strongly.

Metal Q has a nitrate that decomposes to give a salt and a colourless gas only.

The carbonate of metal Q does not decompose when heated with a Bunsen burner.

What is metal Q?

A calcium

B copper

C sodium

D zinc

---

08. 0620_w21_qp_21 Q: 28

Which statements about the thermal decomposition of copper(II) nitrate are correct?

1 A brown gas is given off.

2 A gas which relights a glowing splint is given off.

3 The solid residue is an acidic oxide.

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

---

09. 0620_w21_qp_23 Q: 26

Chromium is a more reactive metal than iron but less reactive than zinc.

Which statements are correct?

1 Chromium does not react with dilute hydrochloric acid.

2 Chromium oxide is reduced when it is heated with carbon.

3 Chromium reacts with zinc oxide to form zinc.

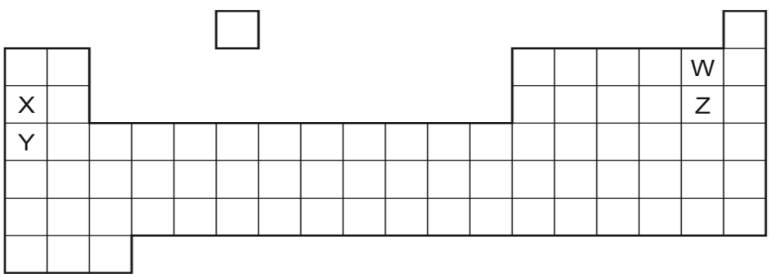
4 Chromium reacts with steam to form hydrogen gas.

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

---

10. 0620_m20_qp_22 Q: 23

The diagram shows elements W, X, Y and Z in a section of the Periodic Table.



Which statement about the reactivity of the elements is correct?

A X is more reactive than Y, and W is more reactive than Z.

B X is more reactive than Y, and Z is more reactive than W.

C Y is more reactive than X, and W is more reactive than Z.

D Y is more reactive than X, and Z is more reactive than W.

---

11. 0620_m20_qp_22 Q: 26

Four metals, iron, copper, magnesium and Y, are heated separately with their oxides.

The results are shown.

metal	magnesium oxide	Y oxide	copper oxide	iron oxide
Y	✗	✗	✓	✓
magnesium	✗	✓	✓	✓
copper	✗	✗	✗	✗
iron	✗	✗	✗	✗

key

✓ = reacts

✗ = no reaction

What is the order of reactivity of the metals, least reactive first?

	least reactive ⟶ most reactive			
A	copper	iron	Y	magnesium
B	copper	Y	iron	magnesium
C	magnesium	iron	Y	copper
D	magnesium	Y	iron	copper

---

12. 0620_p20_qp_20 Q: 28

The table shows the results of adding three metals, P, Q and R, to dilute hydrochloric acid and to water.

metal	dilute hydrochloric acid	water
P	hydrogen produced	hydrogen produced
Q	no reaction	no reaction
R	hydrogen produced	no reaction

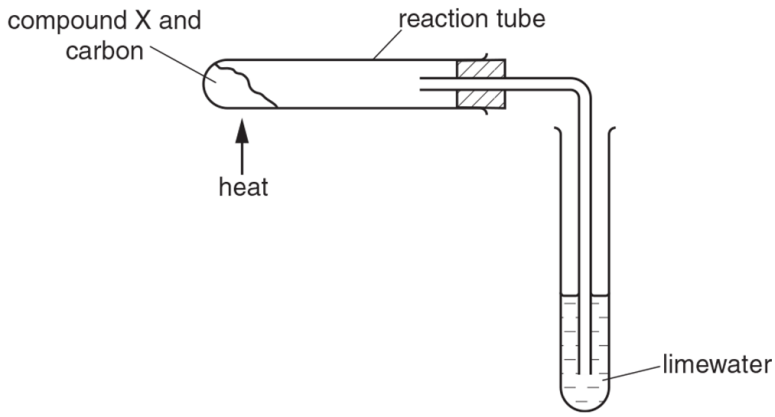
What is the order of reactivity of the metals?

	most reactive ⟶		least reactive
A	P	R	Q
B	P	Q	R
C	R	Q	P
D	R	P	Q

---

13. 0620_p20_qp_20 Q: 29

Compound X is heated with carbon using the apparatus shown.



A brown solid is formed in the reaction tube and the limewater turns cloudy.

What is compound X?

A calcium oxide

B copper(II) oxide

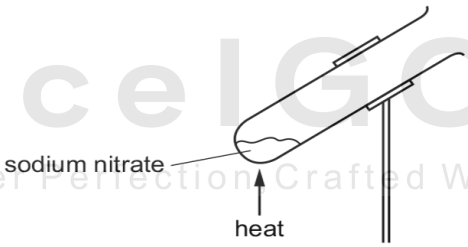
C magnesium oxide

D sodium oxide

---

14. 0620_s20_qp_21 Q: 26

Sodium nitrate is a white crystalline solid that decomposes on heating.



Which row describes the decomposition products formed when sodium nitrate is heated strongly?

	solid products	gaseous products
A	sodium nitrite	NO_2 and O_2
B	sodium nitrite	O_2 only
C	sodium oxide	NO_2 and O_2
D	sodium oxide	O_2 only

---

15. 0620_s20_qp_21 Q: 28

Element Y reacts with copper(II) oxide to form copper.

Element Y will not react with zinc oxide. Copper has no reaction with zinc oxide.

What is the order of reactivity of these three elements, most reactive first?

A Cu → Y → Zn

B Cu → Zn → Y

C Zn → Cu → Y

D Zn → Y → Cu

---

16. 0620_s20_qp_22 Q: 26

Many metal carbonates decompose when they are heated.

Which row describes what happens when potassium carbonate, calcium carbonate and copper(II) carbonate are heated using a Bunsen burner?

	decomposes easily	decomposes with difficulty	does not decompose at Bunsen temperatures
A	calcium carbonate	copper(II) carbonate	potassium carbonate
B	copper(II) carbonate	calcium carbonate	potassium carbonate
C	copper(II) carbonate	potassium carbonate	calcium carbonate
D	potassium carbonate	calcium carbonate	copper(II) carbonate

---

17. 0620_s20_qp_22 Q: 28

Four iron nails are added to four different metal sulfate solutions.

In which solution does a displacement reaction occur?

A copper(II) sulfate

B magnesium sulfate

C sodium sulfate

D zinc sulfate

---

18. 0620_s20_qp_23 Q: 26

A salt is heated strongly. The only products are a white solid and a colourless gas.

What is the salt?

A copper(II) carbonate

B potassium carbonate

C calcium nitrate

D sodium nitrate

---

19. 0620_s20_qp_23 Q: 28

P, Q, R and S are four metals.

P displaces Q from a solution of its sulfate.

Q reacts with hydrochloric acid and can be extracted from its ore using carbon.

R does not react with hydrochloric acid.

The carbonate of S does not decompose when heated strongly.

What is the order of reactivity of the metals, starting with the most reactive?

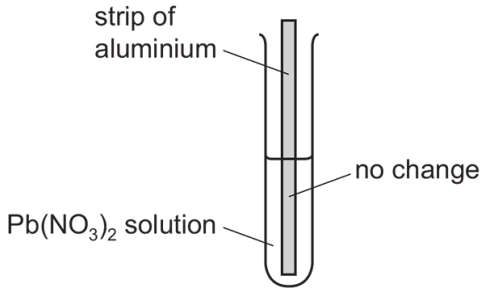
	most reactive →			least reactive
A	R	P	Q	S
B	R	Q	P	S
C	S	P	Q	R
D	S	Q	P	R

---

20. 0620_w20_qp_21 Q: 28

A strip of aluminium is placed into a test-tube containing aqueous lead(II) nitrate and left for several minutes.

Aluminium is higher than lead in the reactivity series.



Which statement explains why lead is **not** displaced by this strip of aluminium?

A A thin insoluble layer of aluminium nitrate forms on the aluminium.

B Nitrate ions are reduced in aqueous solution.

C The ionic bonds between lead and nitrate ions are too strong.

D There is an unreactive oxide layer on the aluminium.

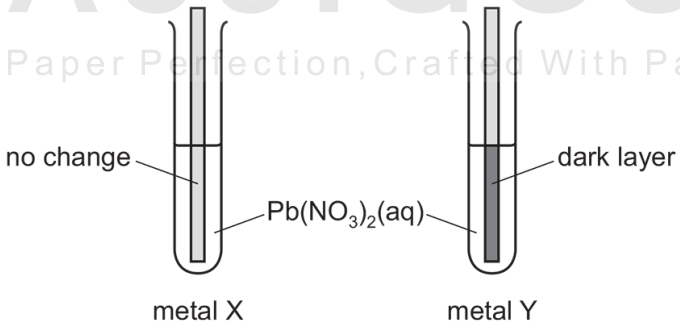
---

21. 0620_w20_qp_23 Q: 28

An experiment is performed to determine the order of reactivity of metals X and Y compared to lead.

Strips of each metal were added to separate test-tubes containing aqueous lead(II) nitrate, $Pb(NO_3)_2$.

The results are shown.



---

22. 0620_m19_qp_22 Q: 27

In which reaction does Fe(s) form ions when the mixture is heated?

A Fe(s) + CaO(s)

B Fe(s) + MgO(s)

C Fe(s) + ZnO(s)

D Fe(s) + CuO(s)

---

23. 0620_m19_qp_22 Q: 28

The list gives the order of some metals and hydrogen in the reactivity series.

Metal X is also included.

most reactive	K
	Mg
	Zn
	H
	X
least reactive	Cu

Which row correctly shows the properties of metal X?

	reacts with dilute acids	oxide reduced by carbon
A	no	no
B	no	yes
C	yes	no
D	yes	yes

---

24. 0620_m19_qp_22 Q: 29

Which metal carbonate does **not** produce carbon dioxide when it is heated?

A copper(II) carbonate

B iron(II) carbonate

C potassium carbonate

D zinc carbonate

---

25. 0620_s19_qp_21 Q: 24

Three metal compounds, P, Q and R, are heated using a Bunsen burner.

The results are shown.

P colourless gas produced, which relights a glowing splint

Q colourless gas produced, which turns limewater milky

R no reaction

Which row shows the identity of P, Q and R?

	P	Q	R
A	magnesium carbonate	potassium carbonate	potassium nitrate
B	magnesium carbonate	potassium nitrate	potassium carbonate
C	potassium nitrate	magnesium carbonate	potassium carbonate
D	potassium nitrate	potassium carbonate	magnesium carbonate

---

26. 0620_s19_qp_21 Q: 26

Four metals, zinc, M, copper and magnesium, are reacted with aqueous solutions of their nitrates.

The results are shown.

metal	magnesium nitrate	M nitrate	copper nitrate	zinc nitrate
magnesium		✓	✓	✓
zinc	✗	✓	✓	
M	✗		✓	✗
copper	✗	✗		✗

key

✓ = reacts

✗ = no reaction

What is the order of reactivity of these four metals starting with the most reactive?

A copper → zinc → M → magnesium

B copper → M → zinc → magnesium

C magnesium → M → zinc → copper

D magnesium → zinc → M → copper

---

27. 0620_s19_qp_22 Q: 24

A student heated the carbonates and nitrates of sodium and copper.

The results are shown.

	compound heated	gases released	solid formed
1	sodium carbonate	carbon monoxide	sodium oxide
2	copper(II) carbonate	carbon dioxide	copper
3	sodium nitrate	oxygen only	sodium nitrite
4	copper(II) nitrate	nitrogen dioxide and oxygen	copper(II) oxide

Which rows describe the correct results?

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

---

28. 0620_s19_qp_23 Q: 24

Magnesium nitrate, magnesium hydroxide and magnesium carbonate all decompose when heated.

Which statement about these decomposition reactions is correct?

A Magnesium carbonate decomposes to release carbon dioxide and oxygen.

B Magnesium hydroxide decomposes to release hydrogen and oxygen.

C Magnesium hydroxide decomposes to release water vapour.

D Magnesium nitrate decomposes to release oxygen only.

---

29. 0620_w19_qp_22 Q: 28

The properties of four metals are listed.

- Metal W does not react with dilute hydrochloric acid.
- Metal X reacts with dilute hydrochloric acid.
- Metal Y displaces metal X from an aqueous solution of its ions.
- Metal Z reacts with water and dilute hydrochloric acid.

What is the order of reactivity of the metals?

	most reactive →			least reactive
A	W	X	Y	Z
B	W	Y	X	Z
C	Z	X	Y	W
D	Z	Y	X	W

---

30. 0620_w19_qp_23 Q: 28

Which word equation represents a reaction which occurs?

A sodium oxide + carbon → sodium + carbon dioxide

B sodium oxide + iron → sodium + iron(II) oxide

C iron(II) oxide + copper → iron + copper(II) oxide

D iron(III) oxide + carbon → iron + carbon dioxide

---

31. 0620_m18_qp_22 Q: 26

A sample of solid X was added to three different solutions to predict the position of X in the reactivity series.

$$X(s) + FeSO_4(aq) \rightarrow \text{no reaction}$$

$$X(s) + 2HCl(aq) \rightarrow XCl_2(aq) + H_2(g)$$

$$X(s) + Zn(NO_3)_2(aq) \rightarrow \text{no reaction}$$

Which other solution would react with solid X?

A $CaSO_4(aq)$ **B** $CuSO_4(aq)$ **C** $MgSO_4(aq)$ **D** $Na_2SO_4(aq)$

---

32. 0620_s18_qp_21 Q: 25

Silver is a less reactive metal than cadmium.

Cadmium is a less reactive metal than barium.

Which statement is correct?

A Barium does not react when heated with silver oxide.

B Cadmium displaces barium from a solution of barium chloride.

C Cadmium displaces silver from a solution of silver nitrate.

D Cadmium reacts when heated with barium oxide.

---

33. 0620_s18_qp_22 Q: 25

Metal X is more reactive than metal Y. Metal Y is more reactive than metal Z.

Which statement is correct?

A When metal X is placed in a solution of Y sulfate, there is no reaction.

B When metal X is placed in a solution of Z sulfate, a reaction occurs.

C When metal Y is placed in a solution of Z sulfate, there is no reaction.

D When metal Z is placed in a solution of X sulfate, a reaction occurs.

---

34. 0620_s18_qp_23 Q: 25

The ionic equations for four reactions are shown.

$$Z + X^{2+} \rightarrow Z^{2+} + X$$

$$Z + 2W^{+} \rightarrow Z^{2+} + 2W$$

$$X + 2W^{+} \rightarrow X^{2+} + 2W$$

$$Y + Z^{2+} \rightarrow Y^{2+} + Z$$

What is the order of reactivity of the four metals, W, X, Y and Z?

	most reactive ⟶			least reactive
A	W	X	Z	Y
B	X	W	Y	Z
C	Y	Z	X	W
D	Z	W	X	Y

---

35. 0620_w18_qp_21 Q: 24

A student heated copper(II) carbonate and copper(II) nitrate in separate test-tubes.

Both compounds decomposed.

Which row shows the gases produced from each reaction?

	copper(II) carbonate	copper(II) nitrate
A	carbon dioxide	nitrogen dioxide only
B	carbon dioxide	oxygen only
C	carbon dioxide	oxygen and nitrogen dioxide
D	oxygen	oxygen and nitrogen dioxide

---

36. 0620_w18_qp_21 Q: 25

Metal X reacts with steam but not with cold water.

What is X?

A calcium

B copper

C sodium

D zinc

---

37. 0620_w18_qp_21 Q: 27

Aluminium objects do not need protection from corrosion.

Iron objects must be protected from corrosion.

Why does aluminium resist corrosion?

A Aluminium does not form ions easily.

B Aluminium does not react with water or air.

C Aluminium has a protective oxide layer.

D Aluminium is below iron in the reactivity series.

---

38. 0620_w18_qp_22 Q: 24

Heating copper(II) carbonate produces copper(II) oxide and carbon dioxide.

Heating the copper(II) oxide formed with carbon produces copper.

Which processes are involved in this conversion of copper(II) carbonate to copper?

A sublimation followed by oxidation

B sublimation followed by reduction

C thermal decomposition followed by oxidation

D thermal decomposition followed by reduction

---

39. 0620_w18_qp_22 Q: 25

Four metals, W, X, Y and Z, are separately reacted with water and dilute hydrochloric acid.

The results are shown.

	metal			
	W	X	Y	Z
reaction with water	fizzes	no reaction	fizzes vigorously	no reaction
reaction with dilute hydrochloric acid	fizzes	no reaction	fizzes violently	fizzes

What is the order of reactivity of the four metals starting with the least reactive?

	least reactive ⟶ most reactive			
A	X	W	Z	Y
B	X	Z	W	Y
C	Y	W	Z	X
D	Y	Z	W	X

---

40. 0620_w18_qp_23 Q: 24

Heating copper(II) carbonate produces copper(II) oxide and carbon dioxide.

Heating the copper(II) oxide formed with carbon produces copper.

Which colour changes are observed during these reactions?

A green → black → brown

B green → white → brown

C blue → black → silver

D blue → white → brown

---

41. 0620_w18_qp_23 Q: 25

Calcium reacts with cold water to produce hydrogen.

Lead reacts slowly when heated in air to form an oxide but has almost no reaction with steam.

Silver does not react with either air or water.

Zinc reacts when heated with steam to produce hydrogen.

What is the order of reactivity starting with the least reactive?

	least reactive ⟶			most reactive
A	calcium	lead	zinc	silver
B	calcium	zinc	lead	silver
C	silver	lead	zinc	calcium
D	silver	zinc	lead	calcium

---

42. 0620_m17_qp_22 Q: 28

Which metal carbonate does **not** produce carbon dioxide when it is heated with a Bunsen burner?

A copper(II) carbonate

B magnesium carbonate

C sodium carbonate

D zinc carbonate

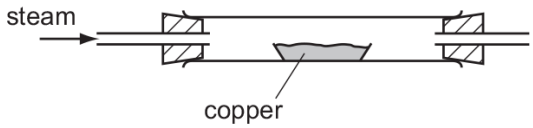
---

43. 0620_m17_qp_22 Q: 29

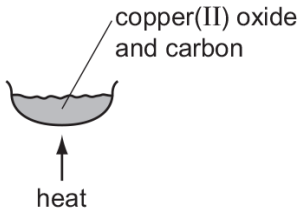
Two experiments are carried out.

In experiment 1, copper is heated with steam.

In experiment 2, copper(II) oxide is heated with carbon.



experiment 1



experiment 2

Which row describes what happens in experiments 1 and 2?

	experiment 1	experiment 2
A	no reaction	no reaction
B	no reaction	reaction
C	reaction	no reaction
D	reaction	reaction

---

44. 0620_s17_qp_21 Q: 25

Metal X is added to a colourless aqueous solution of the sulfate of metal Y.

A coloured solution is formed and metal Y is deposited at the bottom of the beaker.

Which row describes elements X and Y and their relative reactivity?

	type of element	relative reactivity
A	X is a transition element	X is more reactive than Y
B	X is a transition element	Y is more reactive than X
C	Y is a transition element	X is more reactive than Y
D	Y is a transition element	Y is more reactive than X

---

45. 0620_s17_qp_21 Q: 26

Element E:

- forms an alloy
- has a basic oxide
- is below hydrogen in the reactivity series.

What is E?

A carbon

B copper

C sulfur

D zinc

---

46. 0620_s17_qp_22 Q: 27

A list of metals is shown.

aluminium

copper

iron

magnesium

silver

zinc

Which metal will displace all of the other metals from aqueous solutions of their salts?

A aluminium

B iron

C magnesium

D zinc

---

47. 0620_s17_qp_23 Q: 27

The section of the reactivity series shown includes a newly discovered element, symbol X.

The only oxide of X has the formula XO.

Ca

Mg

Fe

X

H

Cu

Which equation shows a reaction which occurs?

A $Cu(s) + X^{2+}(aq) \rightarrow Cu^{2+}(aq) + X(s)$

B $2X(s) + Cu^{2+}(aq) \rightarrow 2X^{+}(aq) + Cu(s)$

C $X(s) + Fe_2O_3(s) \rightarrow 2Fe(s) + 3XO(s)$

D $X(s) + 2HCl(aq) \rightarrow XCl_2(aq) + H_2(g)$

---

48. 0620_w17_qp_21 Q: 28

Information about the nitrates and carbonates of two metals, Q and R, is shown.

	appearance	solubility in water	effect of heat
nitrate of Q	white solid	soluble	colourless gas evolved which relights a glowing splint
carbonate of Q	white solid	soluble	no reaction
nitrate of R	white solid	soluble	brown gas evolved
carbonate of R	white solid	insoluble	colourless gas evolved which turns limewater milky

Which statement is correct?

A Q is calcium and R is magnesium.

B Q is magnesium and R is sodium.

C Q is potassium and R is copper.

D Q is sodium and R is calcium.

---

49. 0620_w17_qp_22 Q: 28

Calcium nitrate decomposes when it is heated.

What is the equation for the thermal decomposition of calcium nitrate?

A $2Ca(NO_3)_2 \rightarrow 2CaO + O_2 + 4NO_2$

B $Ca(NO_3)_2 \rightarrow Ca(NO_2)_2 + O_2$

C $Ca(NO_3)_2 \rightarrow Ca + O_2 + 2NO_2$

D $Ca(NO_3)_2 \rightarrow Ca + 3O_2 + N_2$

---

50. 0620_w17_qp_23 Q: 28

Some metal nitrates and carbonates decompose when heated strongly.

Metal Q has a nitrate that decomposes to give a salt and a colourless gas only.

The carbonate of metal Q does not decompose when heated with a Bunsen burner.

What is metal Q?

A calcium

B copper

C sodium

D zinc

---

51. 0620_m16_qp_22 Q: 27

The reaction below is called the 'thermite reaction'.

$$2Al + Fe_2O_3 \rightarrow 2Fe + Al_2O_3$$

Which pair of substances reacts in a similar way?

A Fe and MgO

B Fe and ZnO

C Mg and CuO

D Zn and Al_2O_3

---

52. 0620_p16_qp_20 Q: 28

The table shows the results of adding three metals, P, Q and R, to dilute hydrochloric acid and to water.

metal	dilute hydrochloric acid	water
P	hydrogen produced	hydrogen produced
Q	no reaction	no reaction
R	hydrogen produced	no reaction

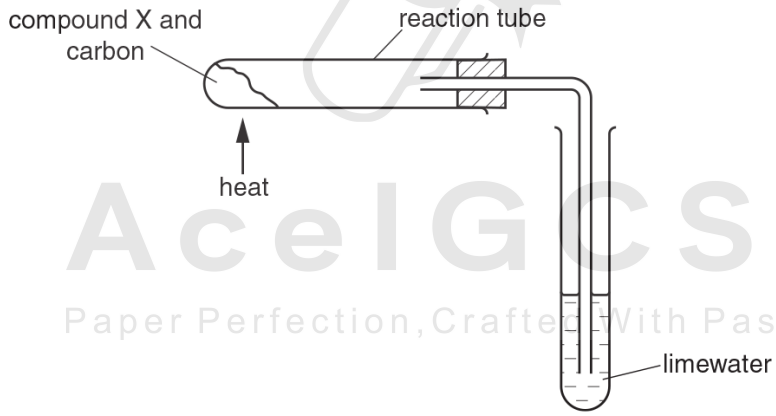
What is the order of reactivity of the metals?

	most reactive ⟶		least reactive
A	P	R	Q
B	P	Q	R
C	R	Q	P
D	R	P	Q

---

53. 0620_p16_qp_20 Q: 29

Compound X is heated with carbon using the apparatus shown.



A brown solid is formed in the reaction tube and the limewater turns cloudy.

What is compound X?

A calcium oxide

B copper(II) oxide

C magnesium oxide

D sodium oxide

---

54. 0620_s16_qp_21 Q: 25

A student investigated the reactions of four metals, R, S, T and U, with solutions of their salts.

The results are given in the table.

metal	metal salt	result
R	S nitrate	reacts
R	T nitrate	reacts
S	U nitrate	no reaction
T	U nitrate	reacts
U	R nitrate	no reaction

What is the order of reactivity of the metals, most reactive first?

A R → S → U → T

B R → T → U → S

C S → U → T→ R

D U → R → T → S

---

55. 0620_s16_qp_22 Q: 25

Some magnesium compounds undergo thermal decomposition.

What are the products of thermal decomposition of magnesium nitrate, $Mg(NO_3)_2$, and magnesium hydroxide, $Mg(OH)_2$?

	$Mg(NO_3)_2$	$Mg(OH)_2$
A	MgO, NO_2 and O_2	MgO and H_2O
B	MgO, NO_2 and O_2	MgO and H_2
C	$Mg(NO_2)_2$ and O_2	MgO and H_2O
D	$Mg(NO_2)_2$ and O_2	MgO and H_2

---

56. 0620_s16_qp_23 Q: 26

Four metals P, Q, R and S are added to separate aqueous solutions of their ions.

The results are shown.

metal	P^{2+}	Q^{2+}	R^{2+}	S^{2+}
P	✗	✗	✓	✓
Q	✓	✗	✓	✓
R	✗	✗	✗	✗
S	✗	✗	✓	✗

key

✓ = reaction occurs

✗ = reaction does not occur

What is the order of reactivity of the metals, most reactive first?

A Q → P → S → R

B Q → S → P → R

C R → P → S → Q

D R → S → P → Q

---

57. 0620_w16_qp_21 Q: 26

The ionic equations represent the reactions between four metals, P, Q, R and S, and solutions of the salts of the same metals.

$$P + Q^{2+} \rightarrow \text{no reaction}$$

$$R + P^{2+} \rightarrow R^{2+} + P$$

$$Q + S^{2+} \rightarrow Q^{2+} + S$$

$$S + P^{2+} \rightarrow S^{2+} + P$$

$$S + R^{2+} \rightarrow S^{2+} + R$$

$$S + Q^{2+} \rightarrow \text{no reaction}$$

What is the correct order of reactivity of the metals?

	most →			least
A	P	R	S	Q
B	Q	R	S	P
C	Q	S	R	P
D	S	Q	P	R

SN	Paper	Q. No.	Answer
01	0620_m21_qp_22	24	A
02	0620_m21_qp_22	27	B
03	0620_s21_qp_21	25	C
04	0620_s21_qp_21	26	C
05	0620_s21_qp_22	25	D
06	0620_s21_qp_22	26	C
07	0620_s21_qp_23	25	C
08	0620_w21_qp_21	28	B
09	0620_w21_qp_23	26	C
10	0620_m20_qp_22	23	C
11	0620_m20_qp_22	26	A
12	0620_p20_qp_20	28	A
13	0620_p20_qp_20	29	B
14	0620_s20_qp_21	26	B
15	0620_s20_qp_21	28	D
16	0620_s20_qp_22	26	B
17	0620_s20_qp_22	28	A
18	0620_s20_qp_23	26	D
19	0620_s20_qp_23	28	C
20	0620_w20_qp_21	28	D
21	0620_w20_qp_23	28	C
22	0620_m19_qp_22	27	D
23	0620_m19_qp_22	28	B
24	0620_m19_qp_22	29	C
25	0620_s19_qp_21	24	C
26	0620_s19_qp_21	26	D
27	0620_s19_qp_22	24	C
28	0620_s19_qp_23	24	C
29	0620_w19_qp_22	28	D
30	0620_w19_qp_23	28	D
31	0620_m18_qp_22	26	B
32	0620_s18_qp_21	25	C
33	0620_s18_qp_22	25	B
34	0620_s18_qp_23	25	C
35	0620_w18_qp_21	24	C
36	0620_w18_qp_21	25	D
37	0620_w18_qp_21	27	C
38	0620_w18_qp_22	24	D
39	0620_w18_qp_22	25	B
40	0620_w18_qp_23	24	A
41	0620_w18_qp_23	25	C
42	0620_m17_qp_22	28	C
43	0620_m17_qp_22	29	B
44	0620_s17_qp_21	25	A
45	0620_s17_qp_21	26	B
46	0620_s17_qp_22	27	C
47	0620_s17_qp_23	27	D
48	0620_w17_qp_21	28	D
49	0620_w17_qp_22	28	A

SN	Paper	Q. No.	Answer
50	0620_w17_qp_23	28	C
51	0620_m16_qp_22	27	C
52	0620_p16_qp_20	28	A
53	0620_p16_qp_20	29	B
54	0620_s16_qp_21	25	B
55	0620_s16_qp_22	25	A
56	0620_s16_qp_23	26	A
57	0620_w16_qp_21	26	C