



عرض المعلومات المساعدة



عرض التغذية الراجعة

عرض جميع الأسئلة ▶

السؤال 1



Select the best answer.

The element beryllium (Be) is a metal. Based on this information, what can be assumed about the element lithium (Li), which is located next to beryllium (Be) on Dmitri Mendeleev's periodic table?

Reihen	Gruppe I. — R ² O	Gruppe II. — RO	Gruppe III. — R ² O ³	Gruppe IV. RH ⁴ RO ²	Gruppe V. RH ⁵ R ² O ⁵	Gruppe VI. RH ⁶ RO ³	Gruppe VII. RH R ² O ⁷	Gruppe VIII. — RO ⁴
1	H=1							
2	Li=7	Be=9.4	B=11	C=12	N=14	O=16	F=19	
3	Na=23	Mg=24	Al=27.3	Si=28	P=31	S=32	Cl=35.5	
4	K=39	Ca=40	—=44	Ti=48	V=51	Cr=52	Mn=55	Fe=56, Co=59, Ni=59, Cu=63.
5	(Cu=63)	Zn=65	—=68	—=72	As=75	Se=78	Br=80	
6	Rb=85	Sr=87	?Yt=88	Zr=90	Nb=94	Mo=96	—=100	Ru=104, Rh=104, Pd=106, Ag=108.
7	(Ag=108)	Cd=112	In=113	Sn=118	Sb=122	Te=125	J=127	
8	Cs=133	Ba=137	?Di=138	?Ce=140	—	—	—	—
9	(—)	—	—	—	—	—	—	—
10	—	—	?Er=178	?La=180	Ta=182	W=184	—	Os=195, Ir=197, Pt=198, Au=199.
11	(Au=199)	Hg=200	Tl=204	Pb=207	Bi=208	—	—	—
12	—	—	—	Th=231	—	U=240	—	—

Nothing can be determined about lithium based only on this information.



Lithium is a gas.



Lithium shares many properties with beryllium.



Lithium is not a gas.

السؤال 2



Select the best answer from the drop-down menu to complete the sentence.

Scandium and gallium are two elements that had not been discovered when Dmitri Mendeleev first organized his periodic table. Scandium and gallium are marked with dashed lines and with predicted atomic masses, 44 and 68, respectively.

Reihen	Gruppe I. — R ² O	Gruppe II. — RO	Gruppe III. — R ² O ³	Gruppe IV. RH ⁴ RO ²	Gruppe V. RH ³ R ² O ⁵	Gruppe VI. RH ² RO ³	Gruppe VII. RH R ² O ⁷	Gruppe VIII. — RO ⁴
1	H=1							
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5	(Cu=63)	Zn=65	—=68	—=72	As=75	Se=78	Br=80	
6	Rb=85	Sr=87	?Yt=88	Zr=90	Nb=94	Mo=96	—=100	Ru=104, Rh=104, Pd=106, Ag=108.
7	(Ag=108)	Cd=112	In=113	Sn=118	Sb=122	Te=125	J=127	
8	Cs=133	Ba=137	?Di=138	?Ce=140	—	—	—	— — — —
9	(—)	—	—	—	—	—	—	
10	—	—	?Er=178	?La=180	Ta=182	W=184	—	Os=195, Ir=197, Pt=198, Au=199.
11	(Au=199)	Hg=200	Tl=204	Pb=207	Bi=208	—	—	— — — —
12	—	—	—	Th=231	—	U=240	—	— — — —

Based on the information in this table, these elements share properties with the element

aluminum ✓ ▼

السؤال 3



Select the best answer.

What would have made John Newlands' law of octaves a more correct method of organizing elements?



If the law of octaves repeated properties of elements at regular intervals.



If the law of octaves included elements that had not been discovered.

If the law of octaves applied to all elements instead of just a few.





It the law of octaves arranged elements by increasing atomic mass.

السؤال 4



Select the best answer.

A spectrometer is a tool for scientists to analyze the properties of light of an object. Every element has a specific light pattern.

How did spectrometers help scientists discover new elements?



Spectrometers helped scientists break elements down into simpler substances.



Spectrometers helped scientists identify the atomic numbers of different elements.



Spectrometers helped scientists to identify relationships between atomic number and atomic mass.

Spectrometers helped scientists to identify individual elements based on their physical properties.



السؤال 5



Select the best answer.

How might the periodic table be different today were it not for Henry Moseley's contributions?

- ☐ There would not be as many elements listed on the table.
- ☐ Elements would be arranged by metals, nonmetals, gases, and earths.
- ☐ The law of octaves would be used to arrange the elements in order.
- ☒ Elements would be arranged by atomic mass and not an atomic number. ✓

السؤال 6**Select the best answer from the drop-down menu to complete the sentence.**

John Newlands discovered that the properties of elements are repeated at regular intervals. Newlands' model stated that when the elements were arranged in order of atomic mass, every

eighth ✓ ▼ element shared similar characteristics.

السؤال 7**Select the best answer.**

What discovery was a major help in the development of the periodic table?

☐ A method of determining an element's chemical properties.

☐ The discoveries of new compounds used in chemical industries.

☒ A method of measuring an element's atomic mass. ✓

☐ The development of microscopes.

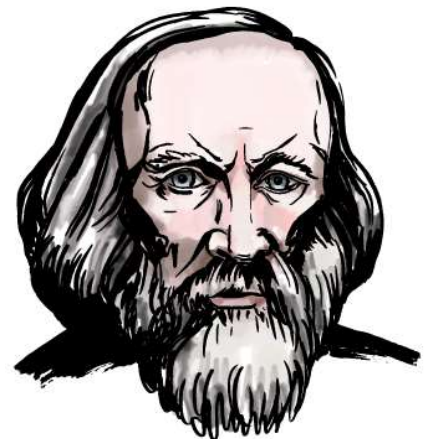
السؤال 8



Select the best answer from the drop-down menu to complete the sentence.

Dmitri Mendeleev used **atomic mass** ✓ ▼ of known

elements to predict the existence of elements that had not been discovered yet.



السؤال 9



Select the best answer.

How did Henry Moseley correct the problems in Dmitri Mendeleev's periodic table?



Henry Moseley made rules that applied to all of the elements in the periodic table.



Henry Moseley grouped the elements based on similar properties.



Henry Moseley identified the elements that were missing from the table.



Henry Moseley arranged the elements by atomic number instead of atomic mass.

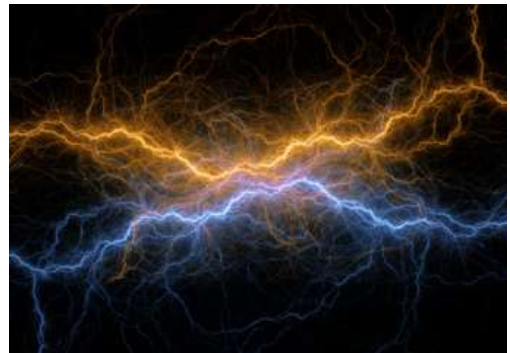


السؤال 10



Select the best answer.

How did electricity help scientists discover new elements?



Electricity helped scientists to develop new compounds for fertilizers and dyes.



Electricity helped scientists to find new methods for identifying elements.



Electricity allowed scientists to break compounds down into simpler elements.





Electricity allowed scientists to determine the atomic numbers of elements.

السؤال 11



Drag and drop the best terms to complete the sentence.

Periodic law states that when elements are arranged in order of

increasing



atomic number, the properties of elements are repeated at

regular



intervals.

↕ consistent throughout

↕ decreasing

↕ equal

↕ irregular

السؤال 12



Drag and drop the best terms to complete the sentence.

The scientist Lothar Meyer was the first to organize the elements to show a connection between the elements' properties that could be observed and

atomic mass



 atomic number groups intervals

السؤال 13

*Select the best answers.*

Which of these played a role in the discovery of new elements in the 1800s?

☐

the Theory of Relativity

☒

the industrial revolution

☐

the invention of the light bulb

☐

the discovery of radioactivity

☒

the discovery of electricity

☐

the invention of the microscope

السؤال 14



Select the best answer from the drop-down menu to complete the sentence.

An element's atomic number represents the

number of protons ✓ ▼ the element has.



السؤال 15



Select the best answer from the drop-down menu to complete the sentence.

When only 33 elements were known, Antoine Lavoisier organized them

into four groups: metals, nonmetals ✓ ▼, gases, and earths.

