

☐ عرض المعلومات المساعدة ☐ عرض التغذية الراجعة

عرض جميع الأسئلة ▶

السؤال 1



Select the correct answer.

Which formula is used to determine the total number of orbitals in a principal energy level?

☒ n^2 ✓

☐ $\sqrt{n}$

☐ $n \times 2$

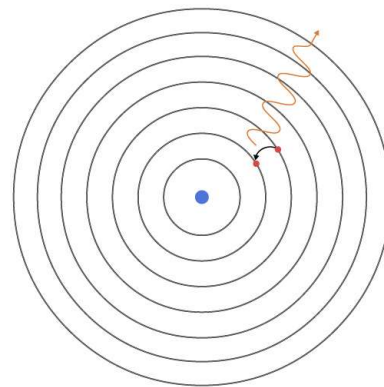
☐ $n + n$

السؤال 2



Select the correct answer from the drop-down menu.

In a hydrogen atom, an electron can occupy one ✓ ▼ orbital(s) at any given time.



السؤال 3



Select the correct answer.

How many orientations does the s orbital have around the nucleus?



3



9



7

1



السؤال 4



Drag and drop the correct answers.

The

f



orbital has a very complex shape.

This orbital has  possible orientations along the axes.

 3

 d

 p

 5

السؤال 5



Fill in the blank using the Word Bank to complete the sentence.

Word Bank			
excited	ground	elevated	emission

If the electron of a hydrogen atom occupies the 1s orbital, then the atom is in its

 state.

السؤال 6



Fill in the blanks with the correct answers from the Word Bank.

Word Bank					
p_y and p_{xz}	sublevels	p_y and p_z	orientations	energy levels	p_z and p_{xy}

There are 3 possible **orientations** ✓ of the p orbital indicated as px,

py and pz ✓

السؤال 7



Fill in the blank with an answer from the Word Bank.

Word Bank				
grounded	excited	unoccupied	charged	

A hydrogen atom's electron can only occupy one orbital at any given time.

The other orbitals in the hydrogen atom are **unoccupied** ✓

السؤال 8



Select the correct answers.

Which notations do we use to indicate the orientations of the p orbital?

☐

$p_{x_2 - y_2}$

☐

p_{z_2}

☒ p_y ✓☐ p_{xz} ☐ p_{xy} ☒ p_x ✓

السؤال 9



Select the best answer.

How many orbitals are there in energy sublevel **d**?

☒ 5 ✓☐ 3☐ 1☐ 7

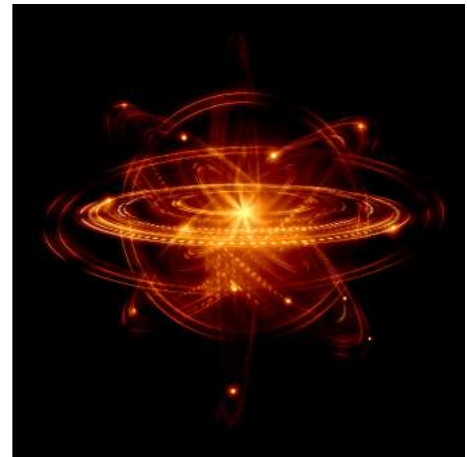
السؤال 10



Select the best answer from the drop-down menu.

The orientation of an orbital can be described in terms of

three ✓ ▼ axes.

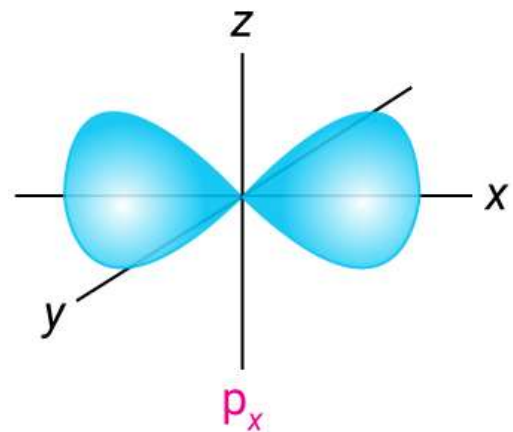


السؤال 11



Select the best answer.

Identify the shape and orientation of the orbital shown alongside.



$d_{x^2-y^2}$



d_{xy}



s

p_x



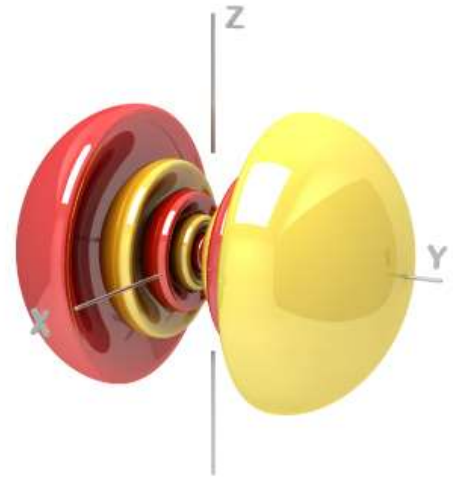
السؤال 12



Select the best answer from the drop-down menu.

An orbital's axes intersect at the center of the

nucleus ✓ ▼



السؤال 13



Select the best answer.

An energy sublevel has two different shapes of orbitals, s and p. How many total orbitals are in this principal energy level?



5



2

4



6

السؤال 14

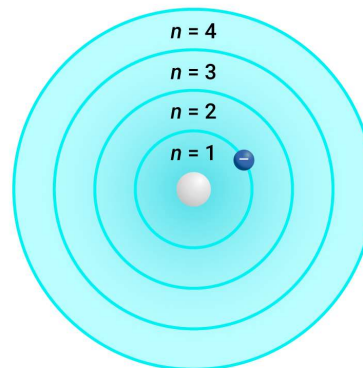


Select the best answer.

How many orbitals are located in a hydrogen atom's fourth principal energy level (

$n = 4$

)?



9



5



8

16

