Consider the following reaction:

$$3\ FeO(s) + 2Al(l) \rightarrow 3\ Fe(l) + Al_2O_3(s)$$

If there are 12 moles of FeO(s) and 12 moles of Al(l),what is the maximum amount of $Al_2O_3(s)$ that can be produced?

1. 2.0 moles
2. 4.0 moles
3. 6.0 moles
4. 8.0 moles
5. 12 moles
6. 24 moles
7. 36 moles

Consider the following reaction:

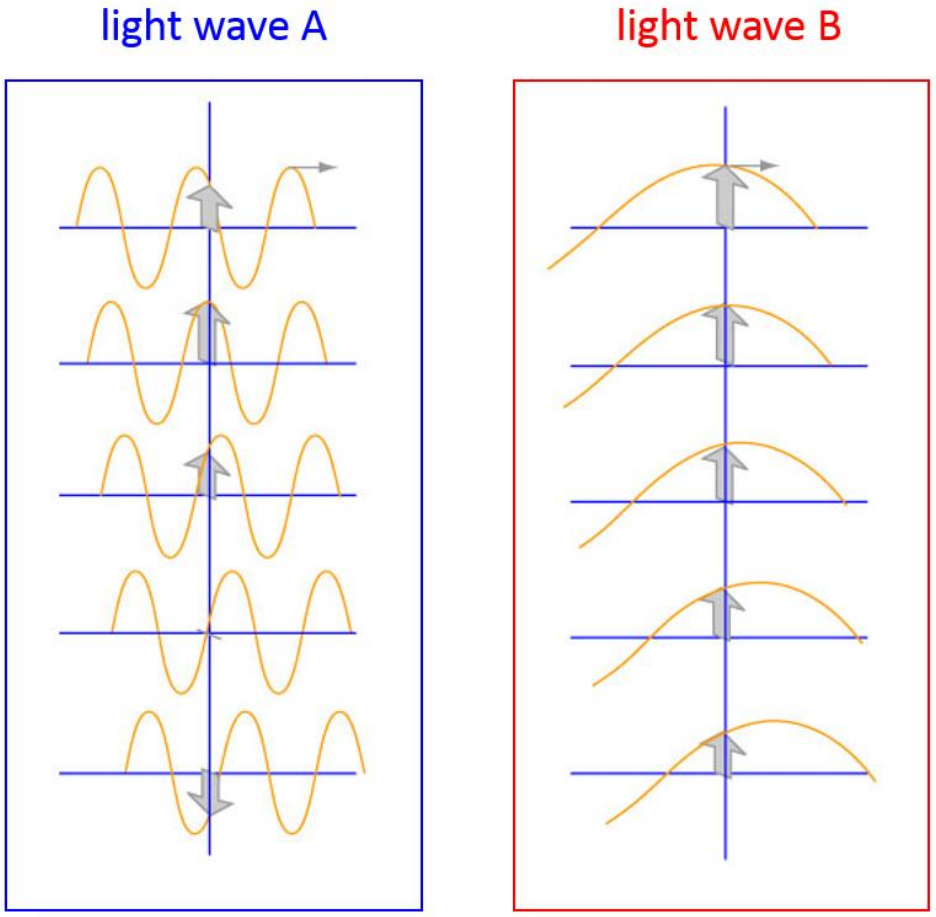
$$3\ FeO(s) + 2Al(l) \rightarrow 3\ Fe(l) + Al_2O_3(s)$$

If there are 12 moles of FeO(s) and 12 moles of Al(l),what is the maximum amount of $Al_2O_3(s)$ that can be produced?

3%	1. 2.0 moles
82%	2. 4.0 moles
8%	3. 6.0 moles
3%	4. 8.0 moles
3%	5. 12 moles
1%	6. 24 moles
0%	7. 36 moles

Identify the correct statement from the choices below:

1. Light wave A has a shorter λ and a lower ν.
2. Light wave A has a shorter λ and a higher ν.
3. Light wave A has a longer λ and a higher ν.
4. Light wave A has a longer λ and a lower ν.



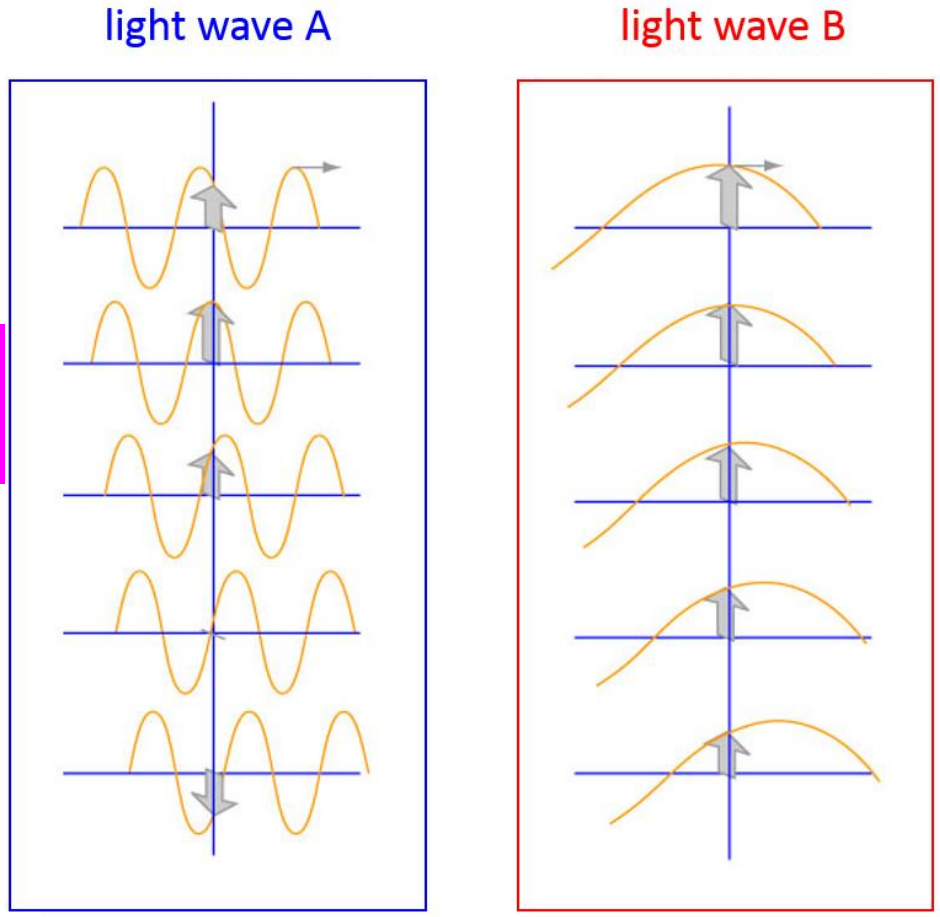
Identify the correct statement from the choices below:

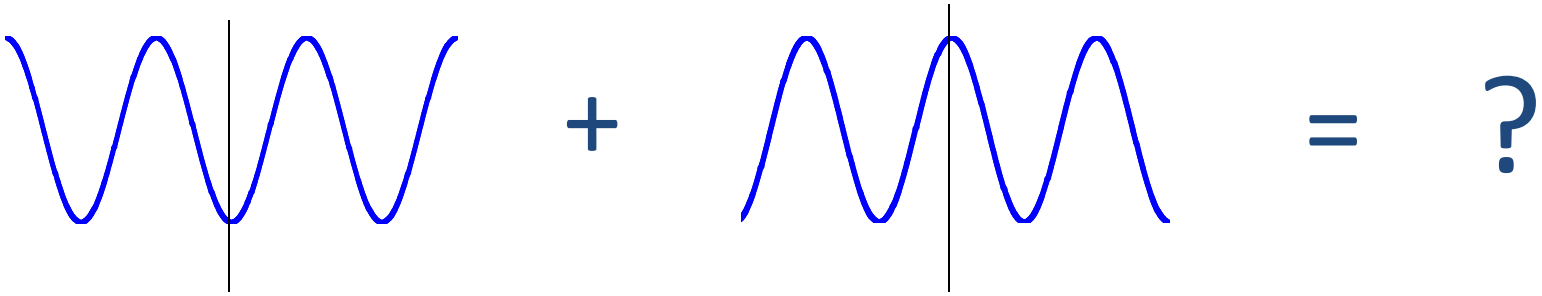
5% 1. Light wave A has a shorter λ and a lower ν.

92% 2. Light wave A has a shorter λ and a higher ν.

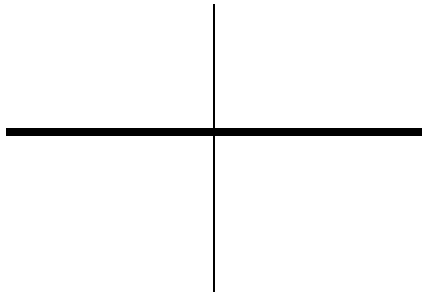
2% 3. Light wave A has a longer λ and a higher ν.

2% 4. Light wave A has a longer λ and a lower ν.

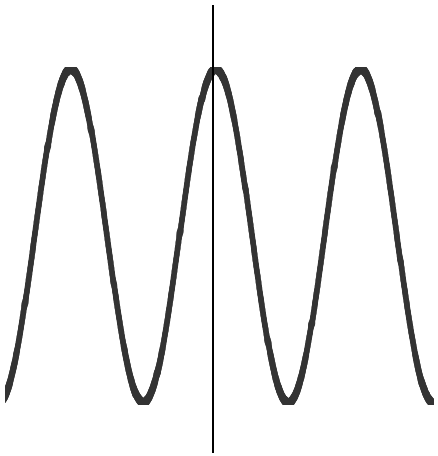




1



2



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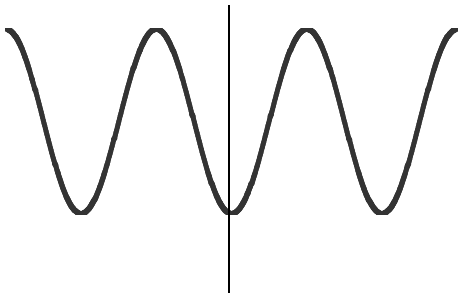

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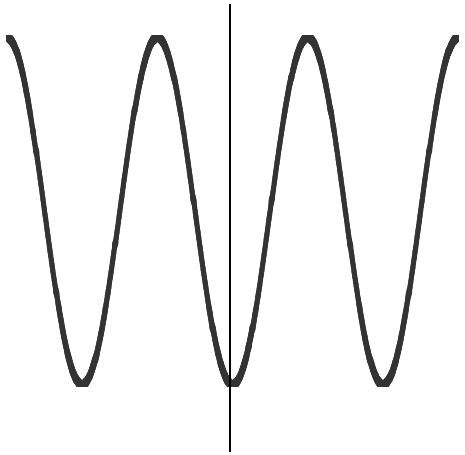
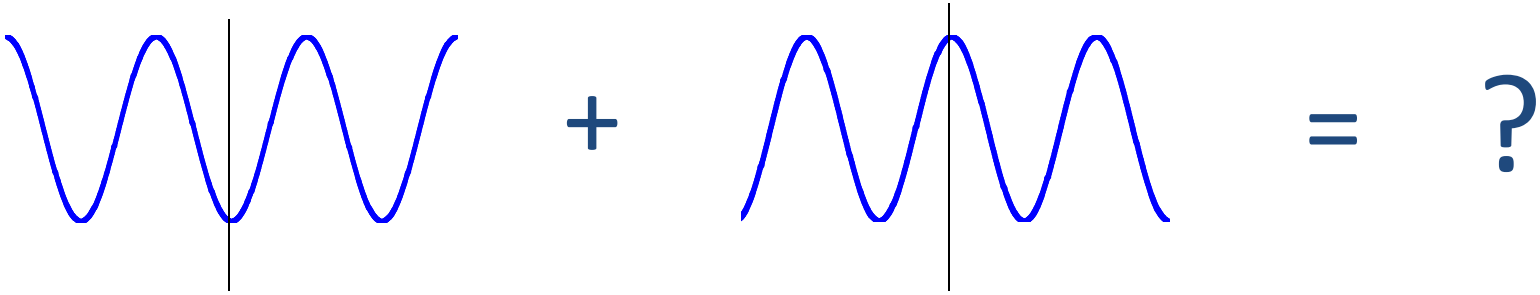
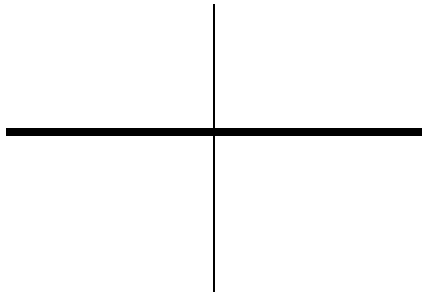
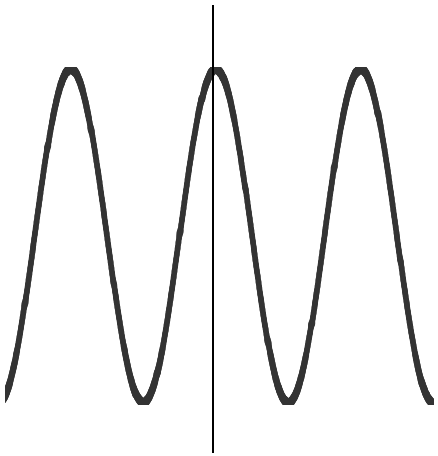




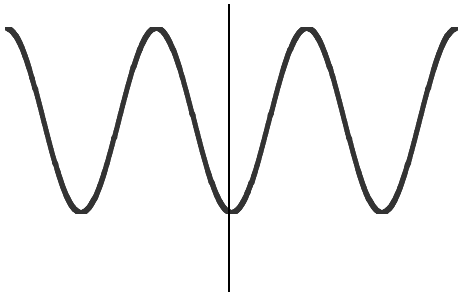
1



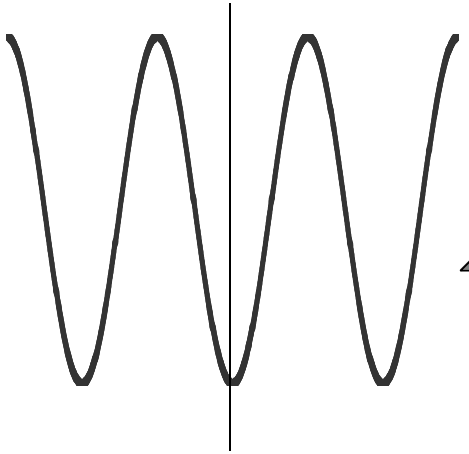
2

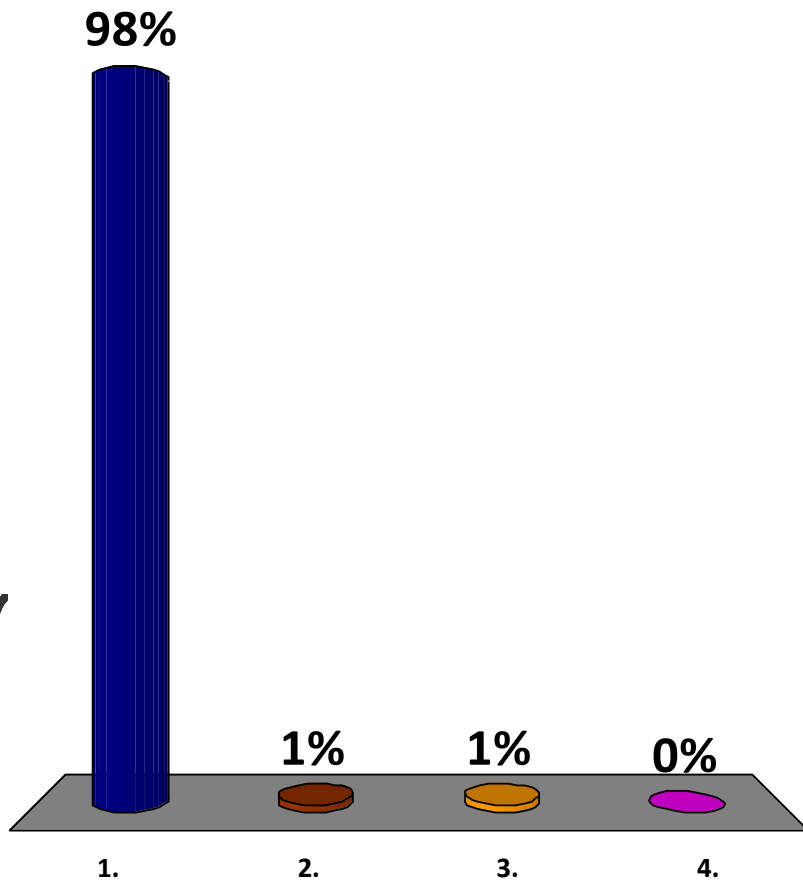


3

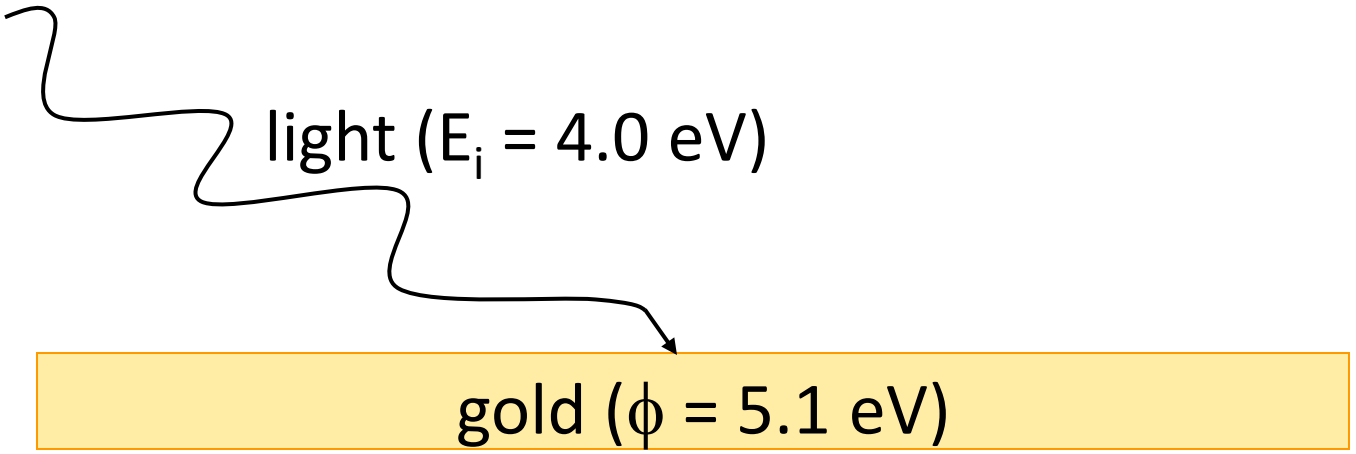


4



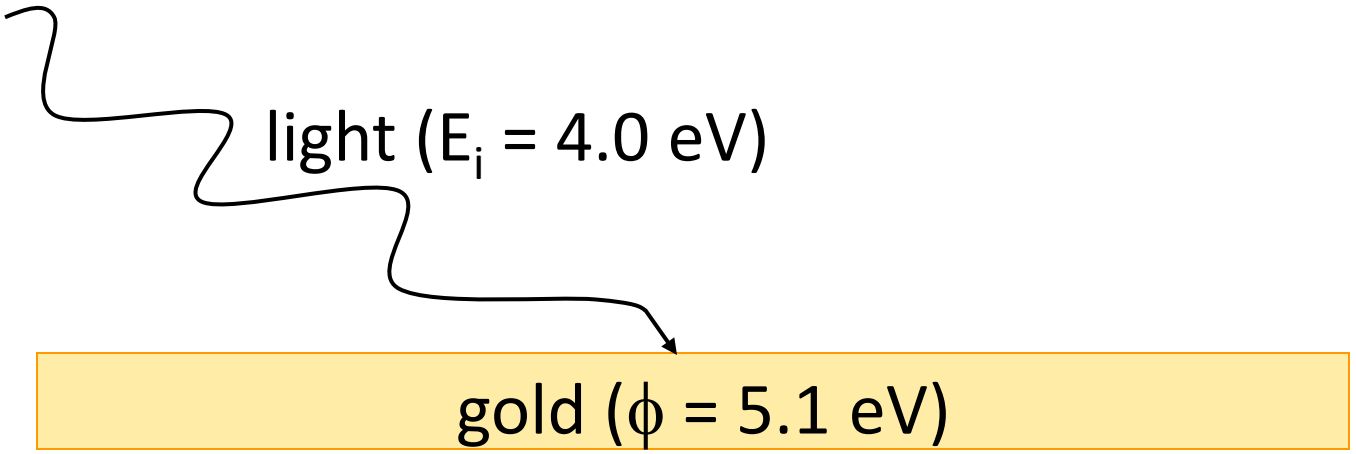


If a beam of light with energy = 4.0 eV (1 eV = 1.602×10^{-19} J) strikes a gold surface, what is the maximum kinetic energy of the ejected electrons?



1. K.E. = 9.1 eV
2. K.E. = 5.1 eV
3. K.E. = 1.1 eV
4. K.E. = 4.0 eV
5. No electrons will be ejected.

If a beam of light with energy = 4.0 eV (1 eV = 1.602×10^{-19} J) strikes a gold surface, what is the maximum kinetic energy of the ejected electrons?



3% 1. K.E. = 9.1 eV

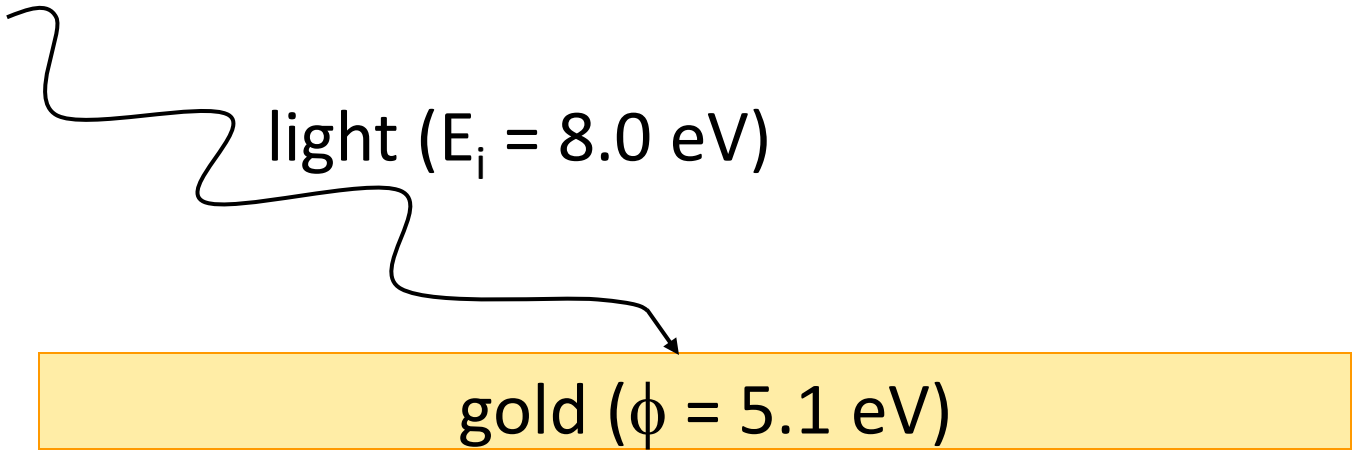
1% 2. K.E. = 5.1 eV

12% 3. K.E. = 1.1 eV

2% 4. K.E. = 4.0 eV

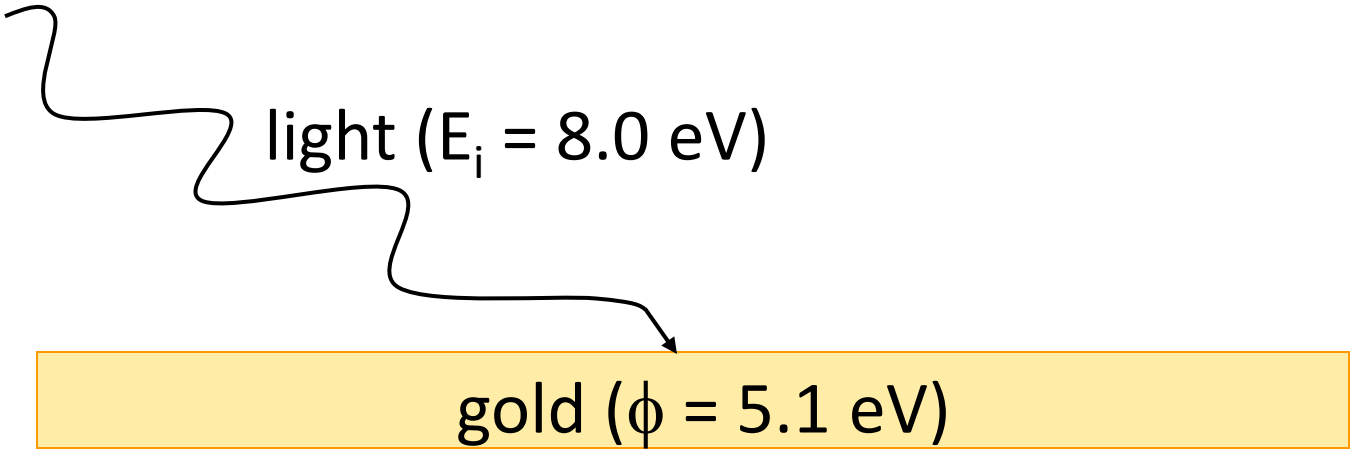
81% 5. No electrons will be ejected.

If a beam of light with energy = 8.0 eV strikes a gold surface, what is the maximum kinetic energy of the ejected electrons?



1. K.E. = 13.1 eV
2. K.E. = 2.9 eV
3. K.E. = 8.0 eV
4. K.E. = 5.1 eV
5. No electrons will be ejected.

If a beam of light with energy = 8.0 eV strikes a gold surface, what is the maximum kinetic energy of the ejected electrons?



0% 1. K.E. = 13.1 eV

98% 2. K.E. = 2.9 eV

1% 3. K.E. = 8.0 eV

1% 4. K.E. = 5.1 eV

1% 5. No electrons will be ejected.

5.111 Principles of Chemical Science
Fall 2014