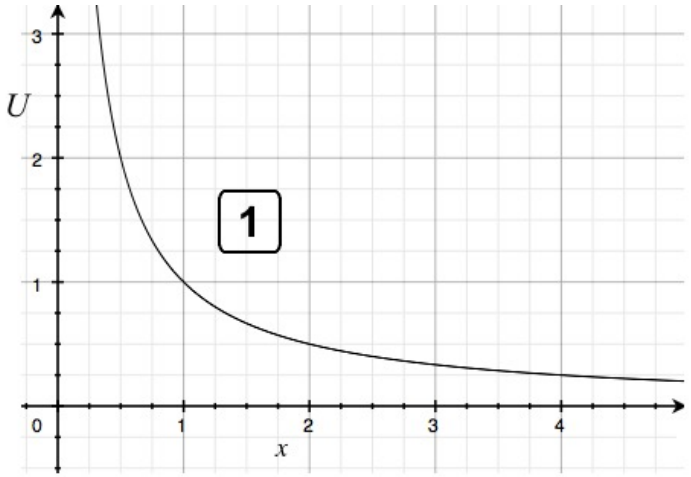
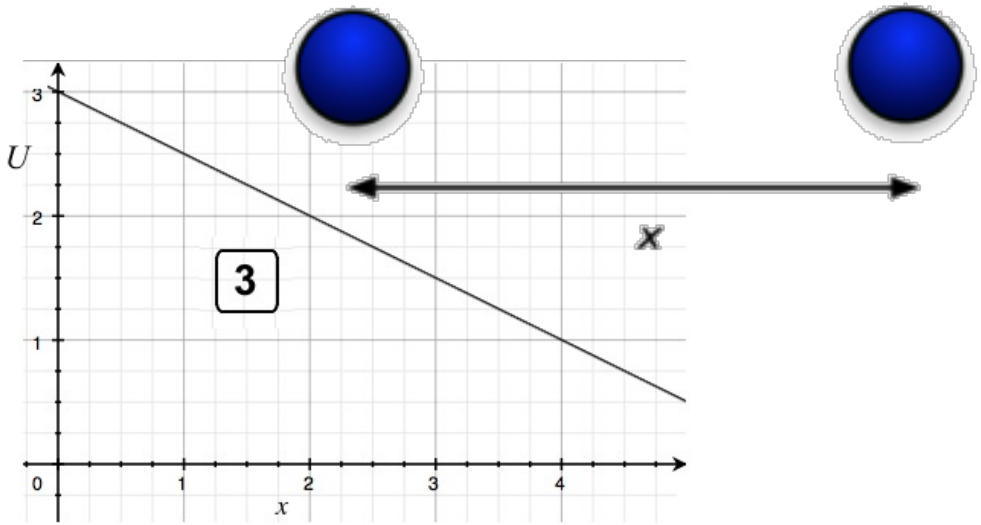
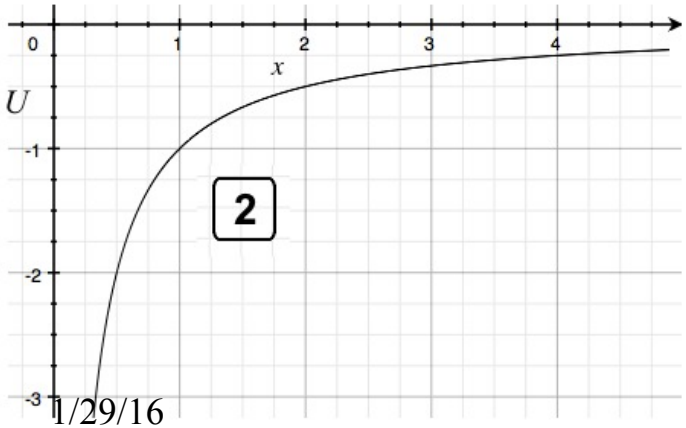
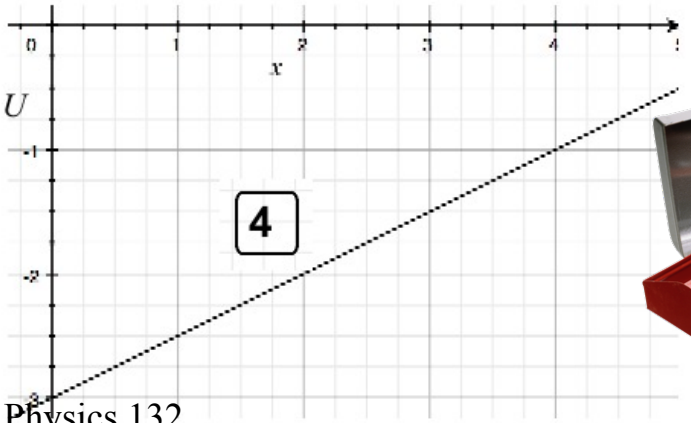
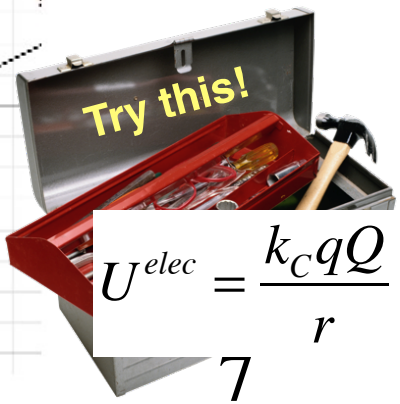
What does the electric potential energy between two identical charges look like?







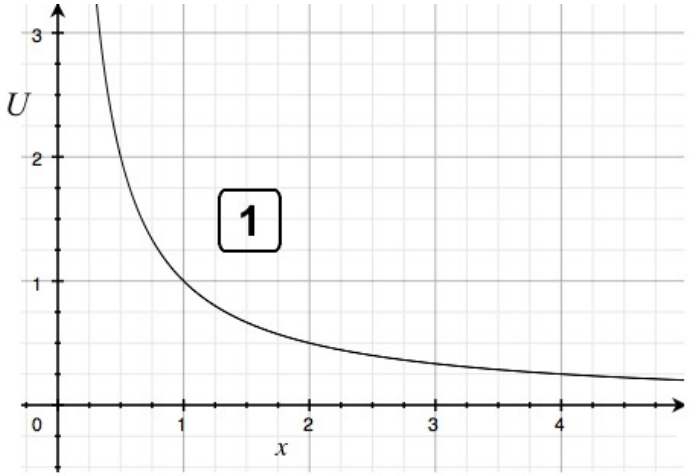


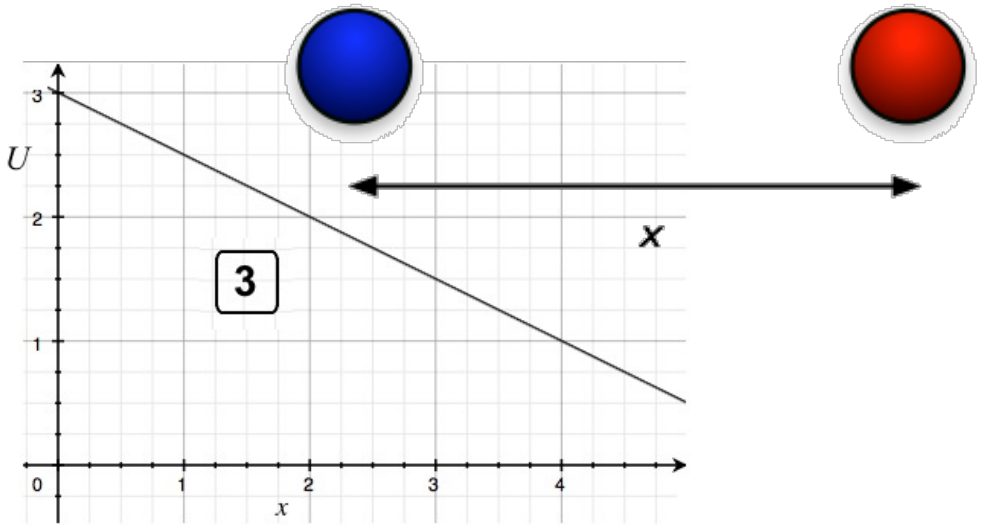


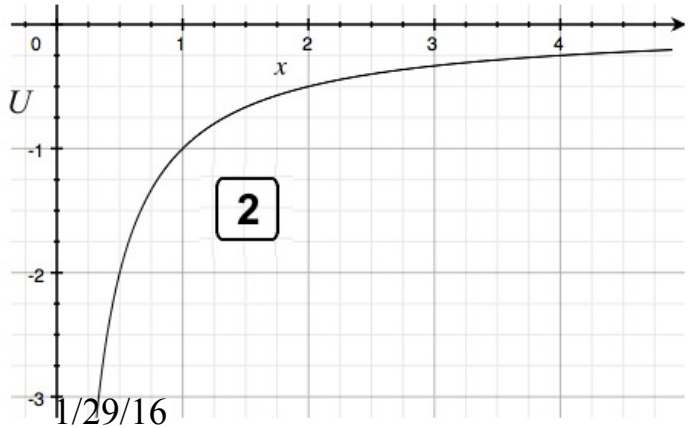
$$U^{elec} = \frac{k_C qQ}{r}$$

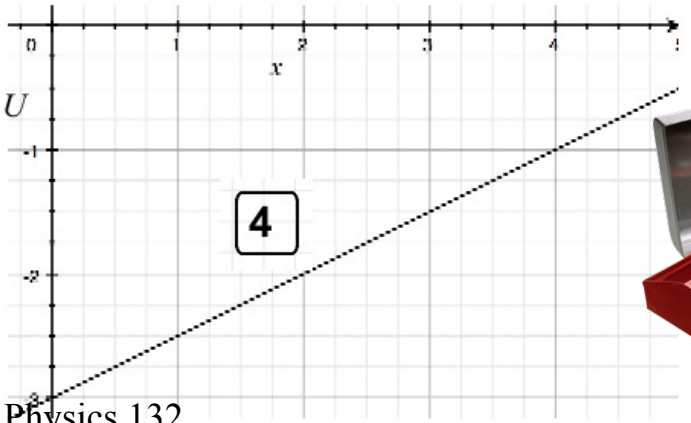
5. None of the above

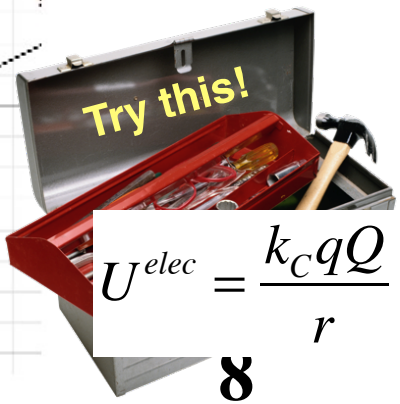
What does the electric potential energy between two opposite charges look like?











$$U^{elec} = \frac{k_C qQ}{r}$$

5. None of the above

When a positive (test) charge is released from rest near a fixed positive (source) charge what happens to the electric potential energy of the test charge?

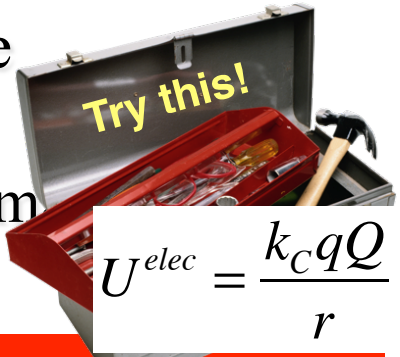
1. It will increase because the test charge will move towards the source charge.
2. It will decrease because the test charge will move away from the source charge.
3. It will increase because the test charge will move away from the source charge.
4. It will decrease because the test charge will move towards the source charge.
5. It will remain constant because the test charge rem
6. There is not enough information to tell.

$$U^{elec} = \frac{k_C qQ}{r}$$

Do it with the graph!

When a negative (test) charge is released from rest near a fixed positive (source) charge what happens to the electric potential energy of the test charge?

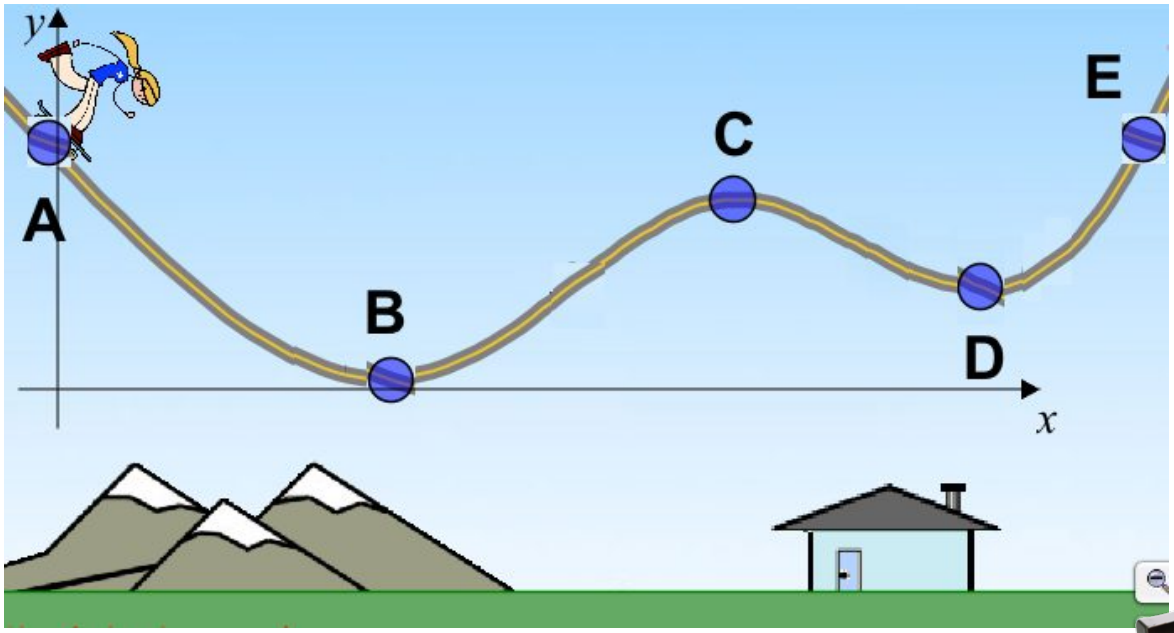
1. It will increase because the test charge will move towards the source charge.
2. It will decrease because the test charge will move away from the source charge.
3. It will increase because the test charge will move away from the source charge.
4. It will decrease because the test charge will move towards the source charge.
5. It will remain constant because the test charge rem
6. There is not enough information to tell.

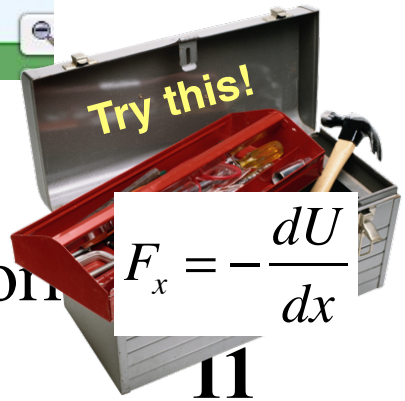


$$U^{elec} = \frac{k_C qQ}{r}$$

Do it with the graph!

If we have a complicated potential energy – and a mass at rest in it – can we tell where it will go when released?





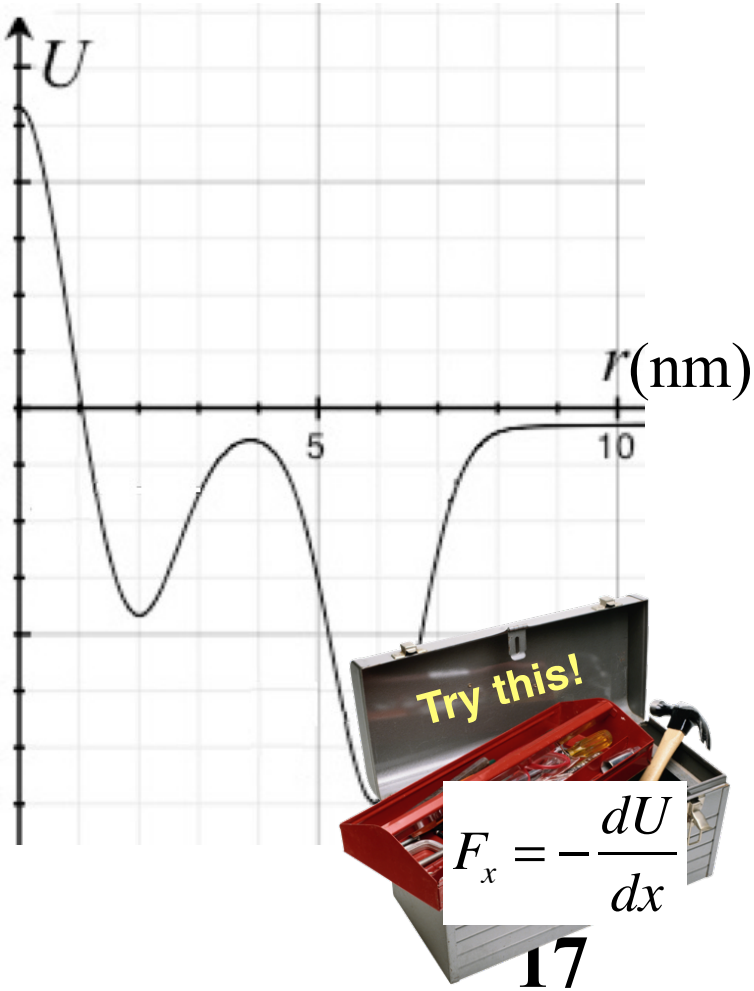
How do you know?

What are the conditions under which this wor

The figure below shows the interaction potential between two molecules (along a particular orientation of the two molecules). The units are in nm (r) and eV (*U*).

When the molecules are separated by 2 nm the force between them is

1. Attractive
2. Repulsive
3. Zero
4. Cannot be determined from the figure.



The figure below shows the interaction potential between two molecules (along a particular orientation of the two molecules). The units are in nm (r) and eV (*U*).

When the molecules are separated by 0.5 nm the force between them is

1. Attractive
2. Repulsive
3. Zero
4. Cannot be determined from the figure.