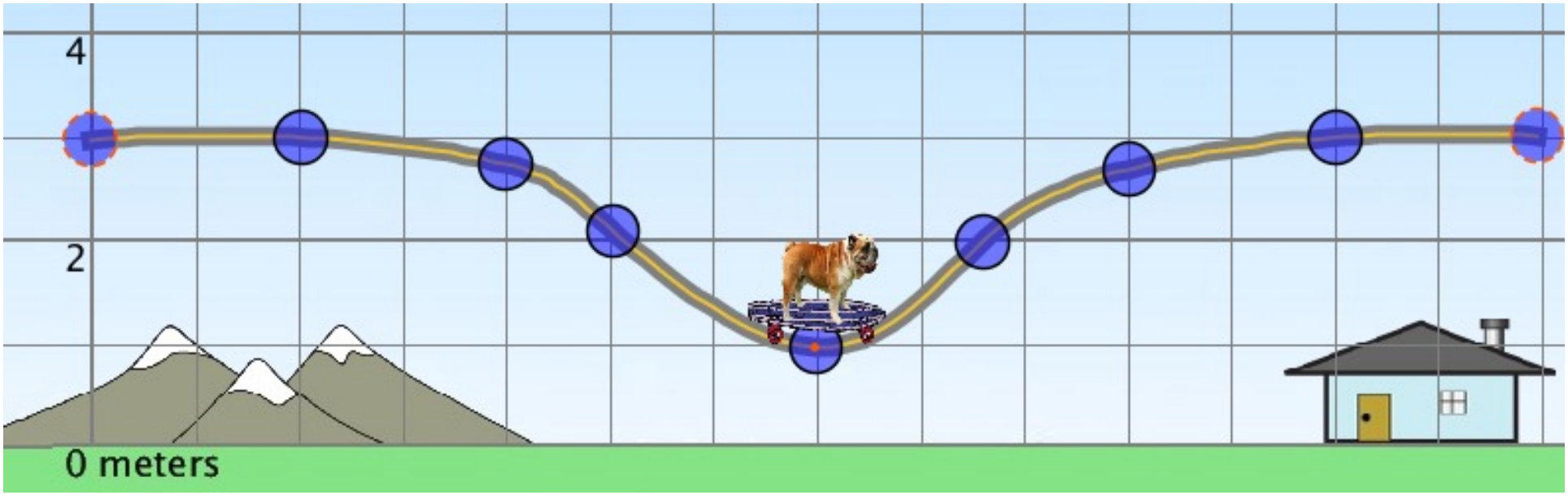
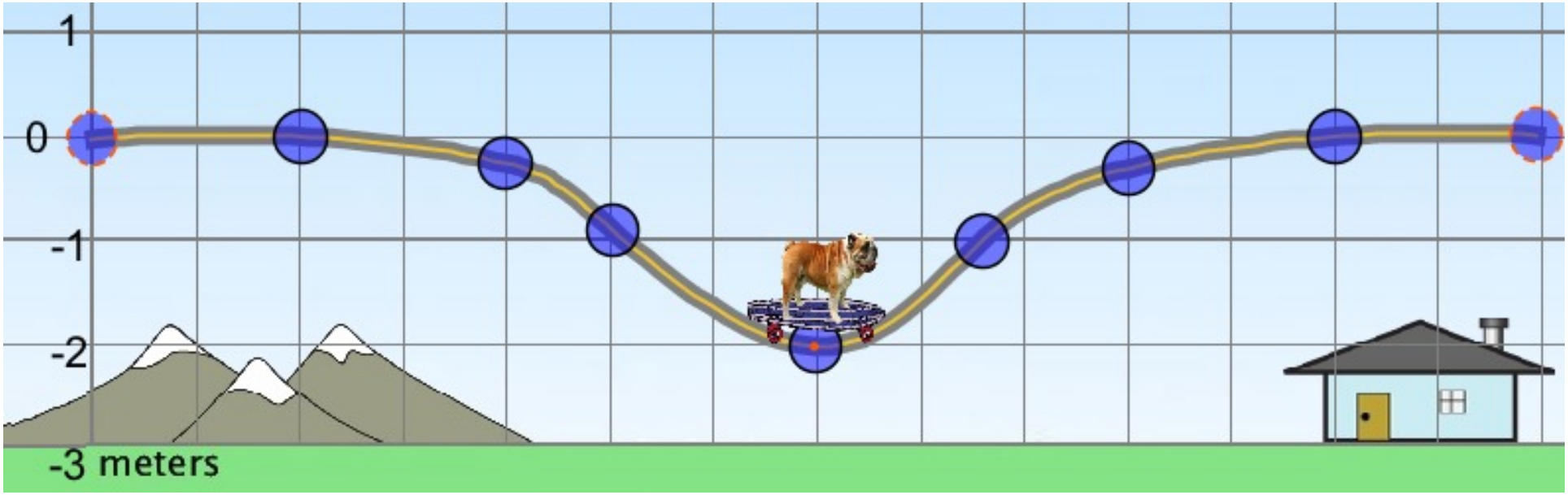
A bulldog on a skateboard is sitting at the bottom of a 2 m dip. How much KE do you have to give them so they will roll out of the dip? The bulldog and skateboard combined have a mass of 20 kg. (Friction and air drag can be ignored.)

1. None
2. About 400 Joules
3. About 600 Joules
4. You can't tell from the information given.



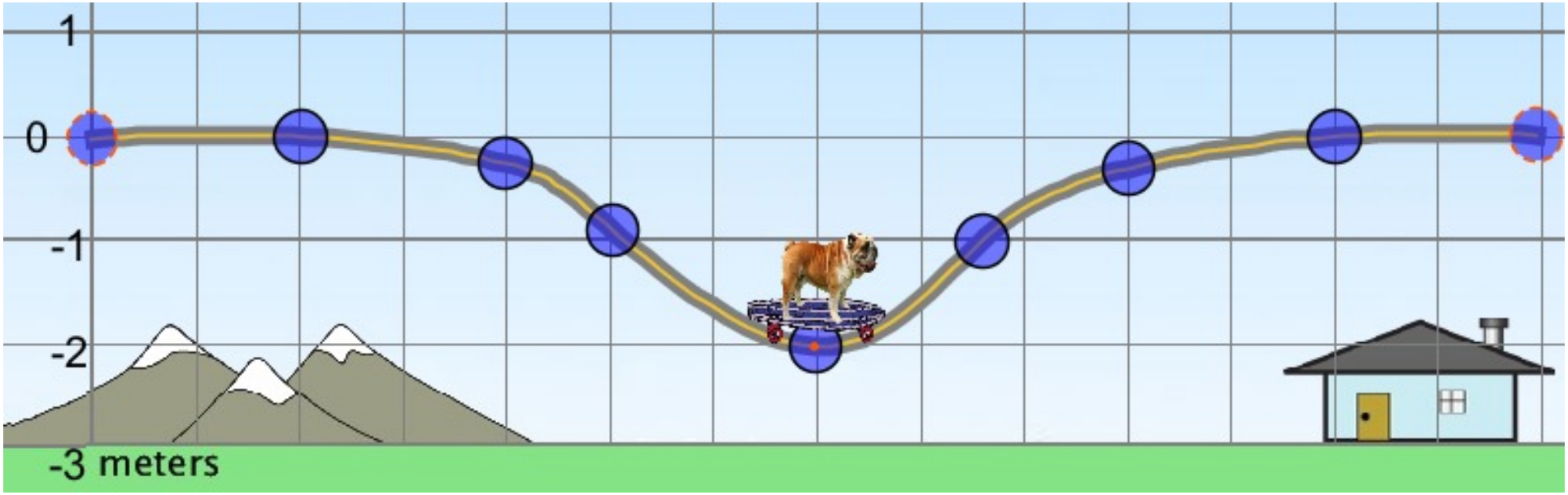
A bulldog on a skateboard is sitting at the bottom of a 2 m dip. How much KE do you have to give them so they will roll out of the dip? The bulldog and skateboard combined have a mass of 20 kg. (Friction and air drag can be ignored.)

1. None
2. About 400 Joules
3. About 600 Joules
4. You can't tell from the information given.



A bulldog on a skateboard is sitting at the bottom of a 2 m dip. What is their total mechanical energy? The bulldog and skateboard combined have a mass of 20 kg. Friction and air drag can be ignored.

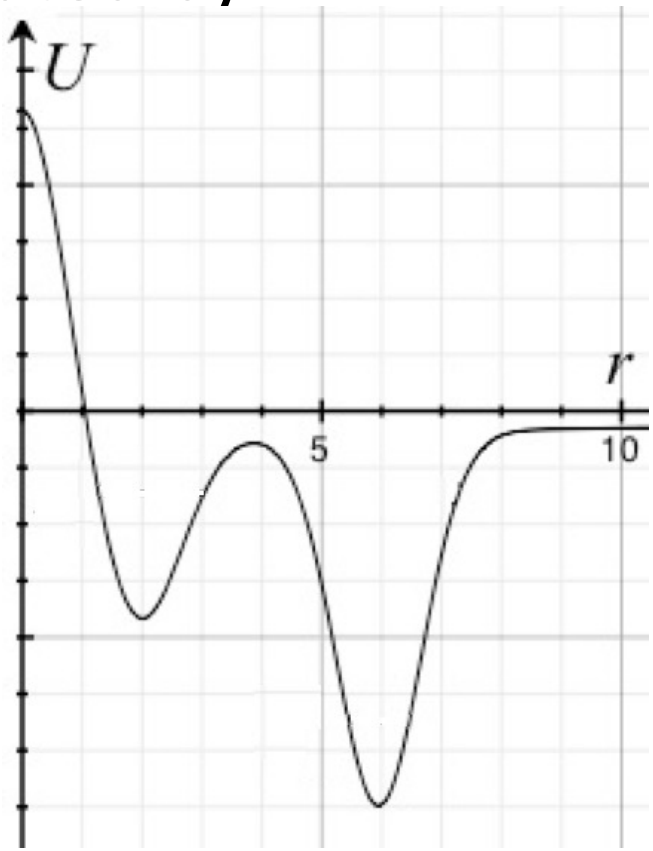
1. None
2. About 400 Joules
3. About 600 Joules
4. You can't tell from the information given.



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 7 nm the force between them is

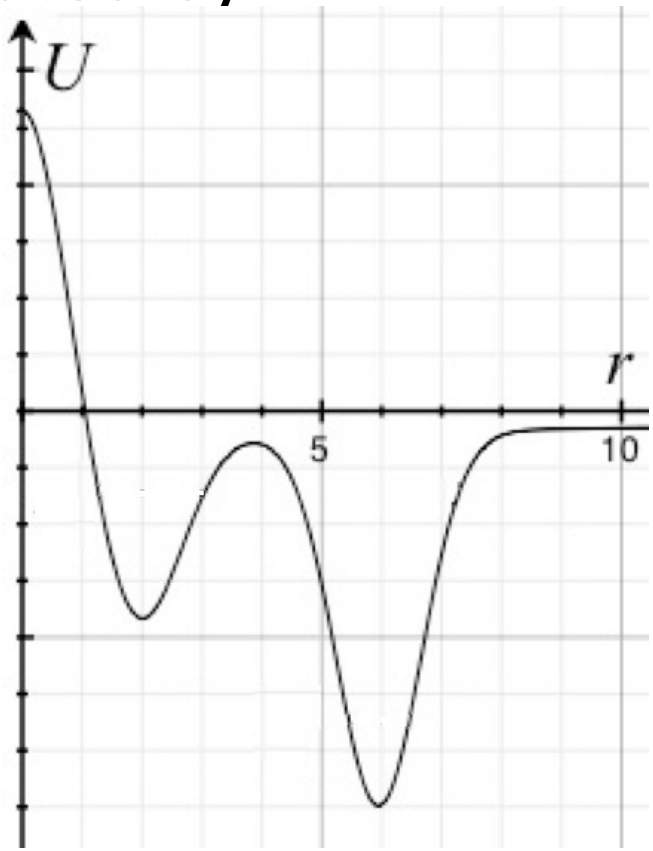
1. Attractive
2. Repulsive
3. Zero
4. Cannot be determined from the figure.



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 2 nm the force between them is

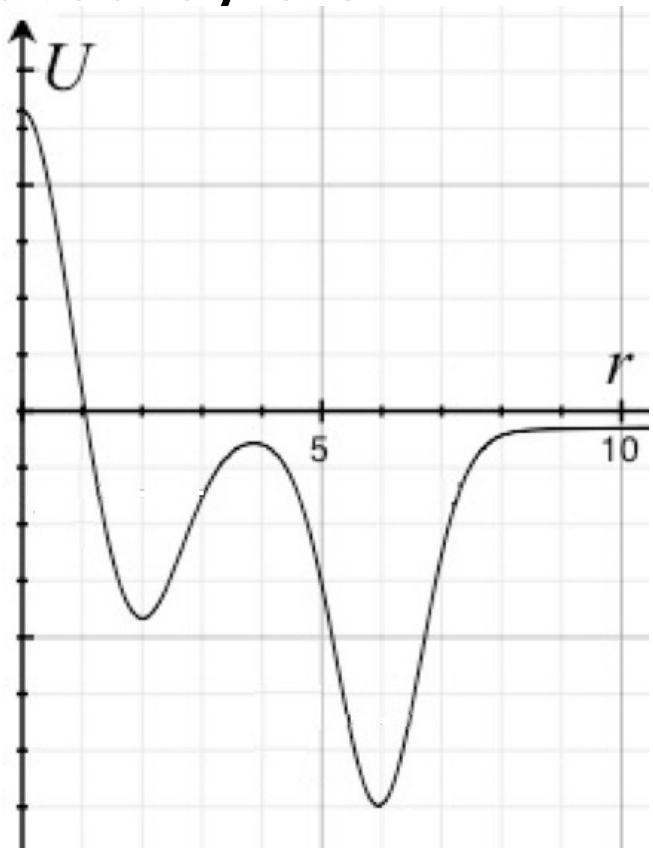
1. Attractive
2. Repulsive
3. Zero
4. Cannot be determined from the figure.



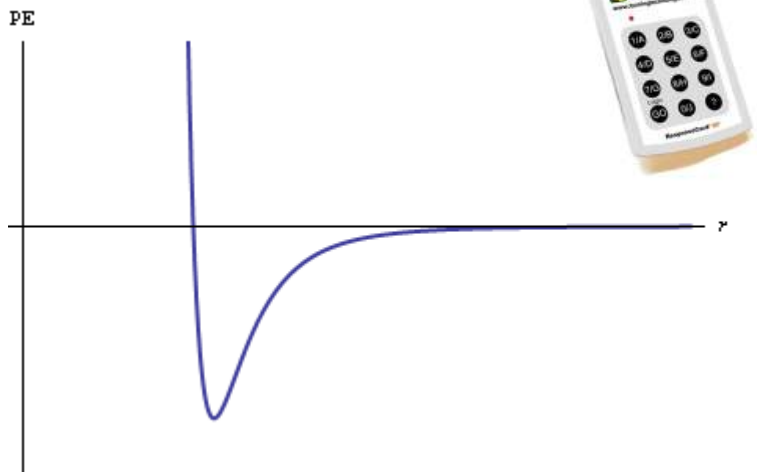
The figure below shows the interaction potential between two molecules (along a particular orientation of the two molecules). The units are in nm (r) and eV (*U*).

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.

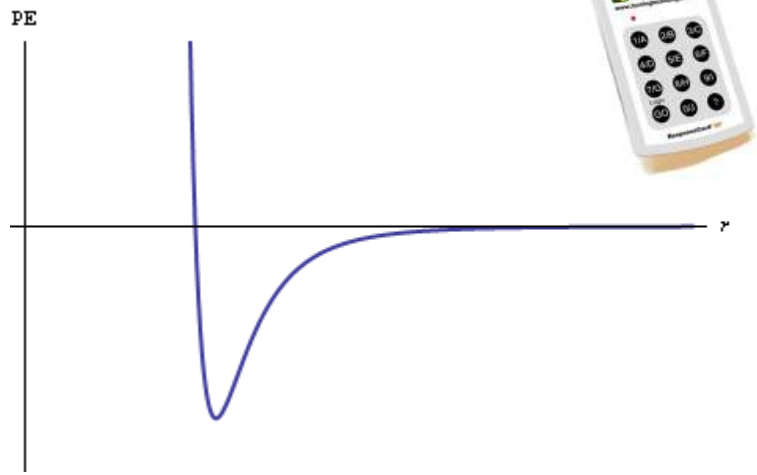


You know that two atoms that are far apart are barely interacting. How is this represented visually in the PE diagram?



1. The potential energy approaches zero as r gets large.
2. The PE curve is close to horizontal as r gets large.
3. The PE curve is close to vertical as r gets small.
4. The potential energy has a minimum.
5. More than one of these
6. The PE diagram doesn't demonstrate this information
7. None of these

These two atoms can exist in a stable bound state. How is this represented visually in the PE diagram?



1. The potential energy approaches zero as r gets large.
2. The PE curve is close to horizontal as r gets large.
3. The PE curve is close to vertical as r gets small.
4. The potential energy has a minimum.
5. More than one of these
6. The PE diagram doesn't demonstrate this information
7. None of these