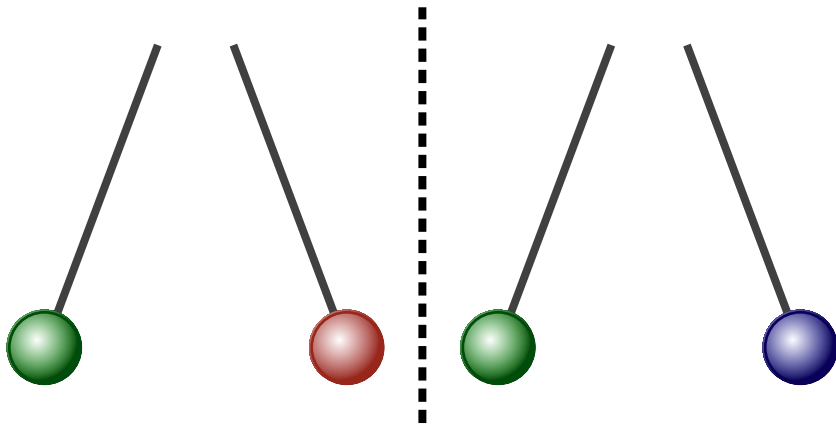


Question 1

Two pairs of balls are suspended next to each other. Each pair is observed to repel and the green ball is the same in both cases.



The red and blue balls are placed near to each other. Which of the following will be observed?

1. The red and blue repel each other.
2. The red and blue attract each other.
3. The red does not exert a force on the blue but the blue does exert a force on the red.
4. The blue does not exert a force on the red but the red does exert a force on the blue.
5. Neither ball exerts a force on the other.

Question 2

Two pieces of tape are attached, with the sticky side of one on the smooth side of the other. The pieces of tape are rubbed and the pair becomes neutral. They are then separated. Consider the following possibilities afterwards:

Case	Upper tape	Lower tape
A	$+3C$	$+3C$
B	$+3C$	$-3C$
C	$-3C$	$+3C$
D	$+3C$	$-5C$

Which of these is *possible*?

1. Only A
2. Only B
3. Only C
4. Only D
5. Only B or C
6. Only B or C or D

Question 3

A small metal sphere is initially neutral. It is placed into contact with a small negatively charged metal cube and then released.

Which of the following is true after the two objects have been in contact?

1. They attract each other and stay in contact.
2. They repel each other and move apart.
3. They neither attract nor repel but still stay in contact.