

Static Electricity Questions 2

1. Two charged spheres, A and B, are suspended from a wire.

Sphere A



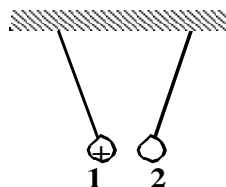
Sphere B



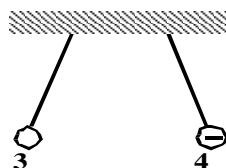
Indicate the polarity of the spheres and the behavior of the spheres when they are suspended next to each other

2. Spheres 1, 2, 3 and 4 are electrically charged. The charge on sphere 1 is positive and the charge on sphere 4 is negative. We do not know the type of charge on sphere 2 or on sphere 3.

When spheres 1 and 2 are brought near each other, they attract each other.



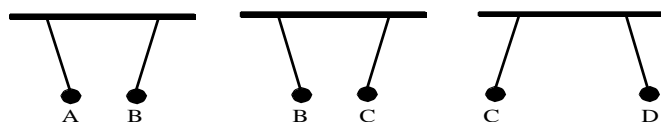
When spheres 3 and 4 are brought near each other, they repel each other.



What type of charge is on sphere 2 and on sphere 3?

- A) The charge on sphere 2 is positive and the charge on sphere 3 is positive.
- B) The charge on sphere 2 is negative and the charge on sphere 3 is negative.
- C) The charge on sphere 2 is positive and the charge on sphere 3 is negative.
- D) The charge on sphere 2 is negative and the charge on sphere 3 is positive.

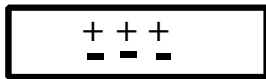
3. We are given four spheres, A, B, C and D. Sphere A is positively charged and the charges on spheres B, C and D are unknown. The following diagram shows what happens to these spheres if we suspend them two by two close to each other.



Given the diagram above, what are the charges on spheres C and D?

- A) Sphere C is positively charged and sphere D is negatively charged.
- B) Sphere C is positively charged and sphere D is positively charged.
- C) Sphere C is negatively charged and sphere D is negatively charged.
- D) Sphere C is negatively charged and sphere D is positively charged.

4. Silk and glass are two electrically neutral materials. Silk can be represented by



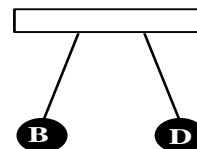
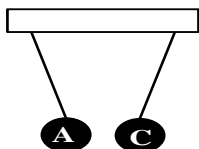
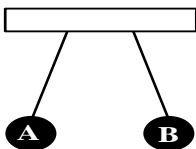
and glass by



After these materials are rubbed together, silk becomes negatively charged and glass becomes positively charged. Which of the following models may represent silk and glass after these materials have been rubbed together?

- A) silk glass
- B) silk glass
- C) silk glass
- D) silk glass

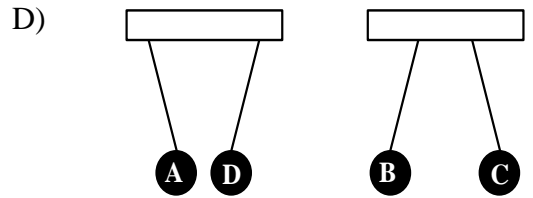
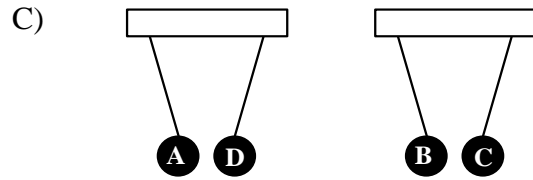
5. Four charged spheres A, B, C and D are suspended from wires. The following diagrams show what happens when these spheres are suspended in pairs close to each other.



Spheres A and D are suspended close to each other, as are spheres B and C.

Which of the following pairs of diagrams correctly shows what will happen to these spheres?

- A)
- B)



6. In a laboratory, a student was given the following materials:

- a piece of fur
- a plastic rod
- a suspended balloon

Using these materials, the student performed the following steps in the order shown below.

Step	Result
1. The plastic rod was rubbed with the piece of fur.	
2. The suspended balloon was touched with the plastic rod.	
3. The rod was brought close to the balloon.	The balloon and the rod repelled each other.
4. The fur was brought close to the balloon.	?

Predict the result for Step 4.