

ELECTRIC FIELD LINES

Draw diagrams that show the electric field lines for each of the following situations.

1. A single positive charge alone
2. A single negative charge alone
3. Two negative charges next to each other but not touching
4. Two positive charges next to each other but not touching
5. A positive charge and a negative charge next to each other but not touching
6. A positive charge that is next to but not touching another positive charge that is twice as strong
7. A positive charge between but not touching two negative charges
8. A negative charge between but not touching two positive charges

Answer the following questions. Use complete sentences.

9. How does the number of field lines on the smaller charge compare to the number of lines on the stronger charge in Question 6?
10. How do the field lines in Question 3 compare to the field lines in Question 4?
11. How do the field lines in Question 7 compare to the field lines in Question 8?
12. What are electric field lines and how are they used?
13. Are electric fields real? How are they represented.