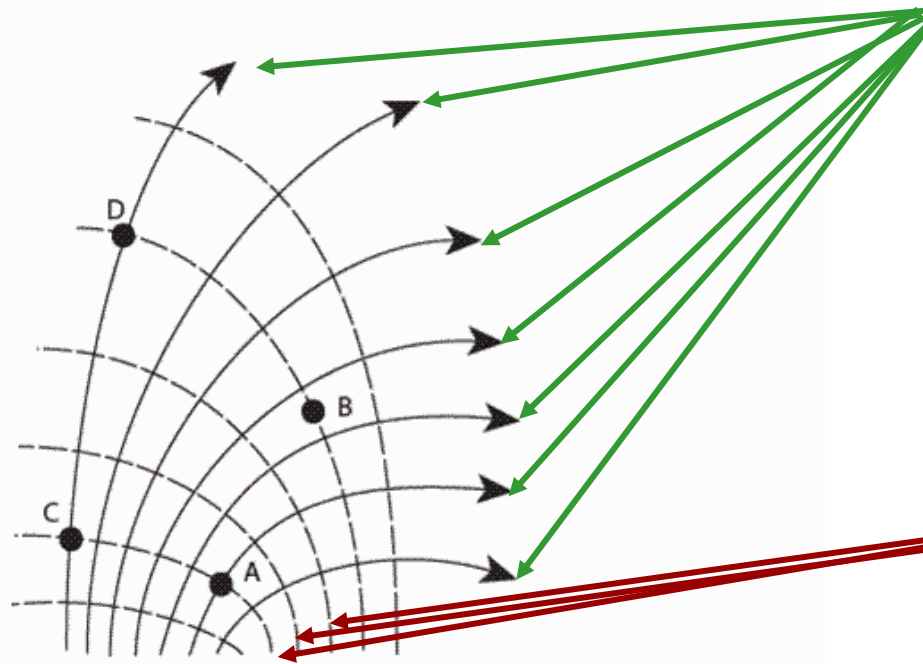


# Hint



The field-line representation of the E-field in a certain region in space is shown below. The dashed lines represent equipotential lines.



What are these?

ELECTRIC FIELD LINES!

What are these?

EQUIPOTENTIALS!

What is the sign of  $W_{AC}$  = work done by E field to move negative charge from A to C ?

A)  $W_{AC} < 0$

**B)  $W_{AC} = 0$**

C)  $W_{AC} > 0$

A and C are on the same equipotential



$W_{AC} = 0$

Equipotentials are perpendicular to the E field: No work is done along an equipotential