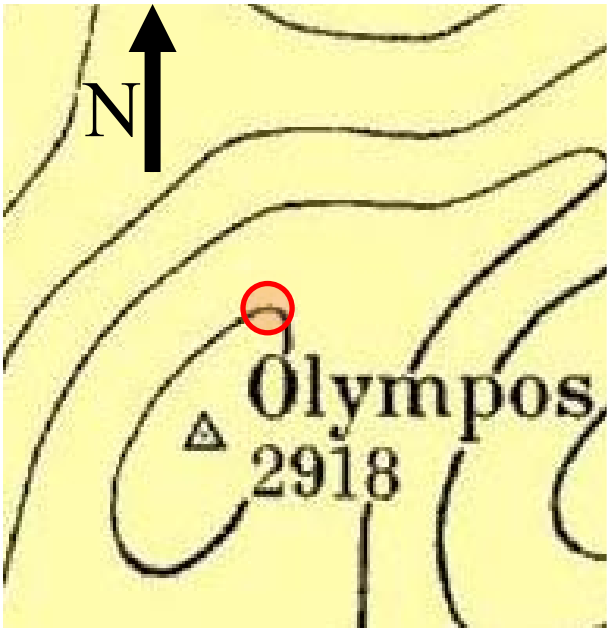
# Walking Down a Mountain




Consider the topo. map at left. Starting at the center of the dot, which direction starts you downhill the fastest?

1. N
2. NE
3. E
4. SE
5. S
6. SW
7. W
8. NW

# Changing C Dimensions

A parallel-plate capacitor has plates with equal and opposite charges ±Q, separated by a distance *d*, and **is not** connected to a battery. The plates are pulled apart to a distance $D > d$. What happens to the potential difference V and the charge Q?

1. V increases, Q increases
2. V decreases, Q increases
3. V is the same, Q increases
4. V increases, Q is the same
5. V decreases, Q is the same
6. V is the same, Q is the same
7. V increases, Q decreases
8. V decreases, Q decreases
9. V is the same, Q decreases

# Changing C Dimensions

A parallel-plate capacitor has plates with equal and opposite charges ±Q, separated by a distance *d*, and **is** connected to a battery. The plates are pulled apart to a distance $D > d$. What happens to the potential difference V and the charge Q?

1. V increases, Q increases
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7. V increases, Q decreases
8. V decreases, Q decreases
9. V is the same, Q decreases

# Changing C Dimensions

A parallel-plate capacitor, disconnected from a battery, has plates with equal and opposite charges, separated by a distance $d$. Suppose the plates are pulled apart until separated by a distance $D > d$. How does the final electrostatic energy stored in the capacitor compare to the initial energy?

1. The final stored energy is smaller
2. The final stored energy is larger
3. Stored energy does not change.