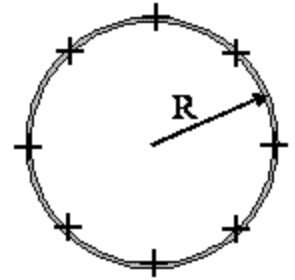


### Warmup 3 - Potential

You have a thin spherical shell of uniform positive charge  $+Q$  centered at the origin with no other charge anywhere (i.e. all the charge is concentrated in a hollow shell at  $r=R$ ).



If we decide to define  $V(\infty)=0$ , what is the sign of  $V(R)$ ?

Please choose one:

- a) Positive                      b) Negative                      c) Zero                      d) It depends

Please explain your reasoning:

Could we instead choose to define  $V(R)=0$ ?

Please choose one:

- a) Yes                      b) No                      c) It depends

Please explain your reasoning:

What is the sign of  $(V(R) - V(0))$ ?

Please choose one:

- a) Positive                      b) Negative                      c) Zero                      d) It depends

Please explain your reasoning: