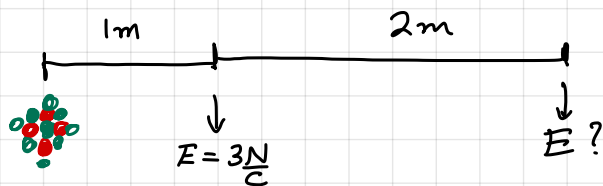


# Physics Battle: Do remaining problems:

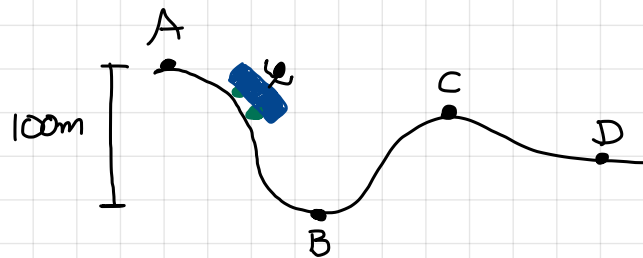
1. The Electric field 1m away from a positively charged ion is  $3 \text{ N/C}$ . a) What is the electric field 3m away from it?



- b) What is the direction of the electric field at these points?

Bonus) How could you determine the charge of the ion? (Mathematically)

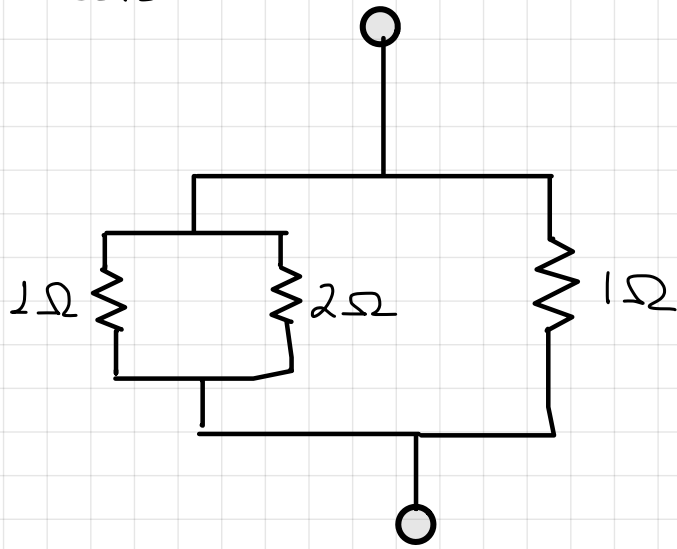
2. Consider the following rollercoaster:



- a) In which point would the energy be highest? Neglect friction of any type and consider only the force due to gravity.
- b) Find the speed at Point B.

# Physics Battle: Do remaining problems:

4. Find the equivalent resistance of the following resistors:



b) What voltage should we use if we want a  $10\text{ A}$  current flowing through the ends?