

QUESTIONS TO HAND IN – EXPERIMENT 4

NAME _____

LAB INSTRUCTOR _____ LAB DAY/TIME _____

1. As one approaches a point charge, the electric field E gets (circle one): **stronger** / **weaker**.
2. The electric field E surrounding a positive point charge falls off in inverse proportion to the square of the distance. If the field at 10 cm is 200 V/m, what is the field at 100 cm?
3. We often describe the electric field between two parallel conductors as “uniform”. What, exactly, does this term mean and how would you represent this situation using electric field lines?
4. The electric potential around a positive point source charge goes from a large positive value nearby, and falls off to zero at an infinite distance. Would a positive test charge gain or lose electric potential energy as it moves away from the source?
5. The electric potential around a negative point source charge goes from a large negative value nearby, and falls off to zero at an infinite distance. Would a positive test charge gain or lose electric potential energy as it moves away from the source?