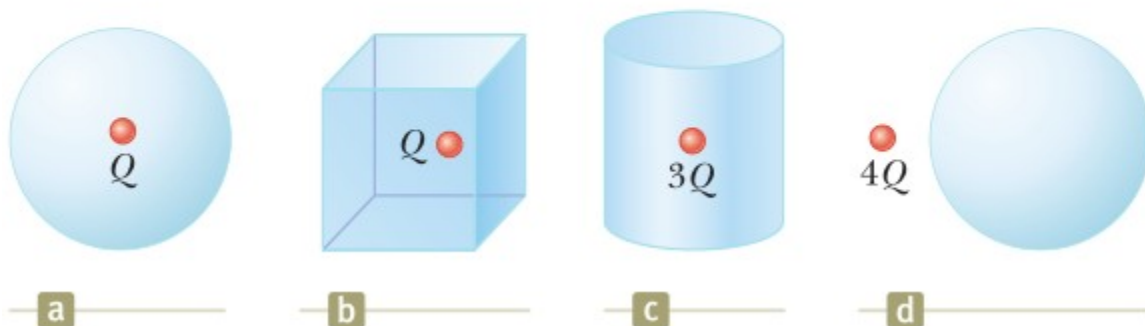


Name: \_\_\_\_\_

Date: \_\_\_\_\_

11. Rank the electric fluxes through each gaussian surface shown in Figure OQ24.11 from largest to smallest. Display any cases of equality in your ranking.



Name: \_\_\_\_\_

Date: \_\_\_\_\_

4. Consider a closed triangular box resting within a horizontal electric field of magnitude  $E = 7.80 \times 10^4 \text{ N/C}$  as shown in Figure P24.4. Calculate the electric flux through (a) the vertical rectangular surface, (b) the slanted surface, and (c) the entire surface of the box.

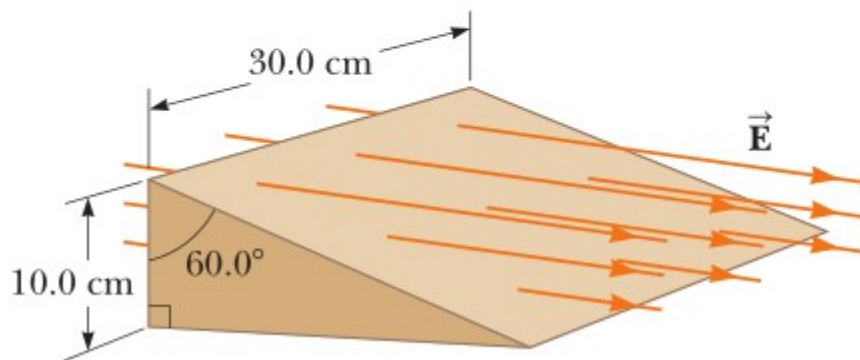


Figure P24.4

Name: \_\_\_\_\_

Date: \_\_\_\_\_

8. **Q.C** A charge of  $170 \mu\text{C}$  is at the center of a cube of edge  $80.0 \text{ cm}$ . No other charges are nearby. (a) Find the flux through each face of the cube. (b) Find the flux through the whole surface of the cube. (c) **What If?** Would your answers to either part (a) or part (b) change if the charge were not at the center? Explain.

Name: \_\_\_\_\_

Date: \_\_\_\_\_

11. **S** Four closed surfaces,  $S_1$  through  $S_4$ , together with the charges  $-2Q$ ,  $Q$ , and  $-Q$  are sketched in Figure P24.11. (The colored lines are the intersections of the surfaces with the page.) Find the electric flux through each surface.

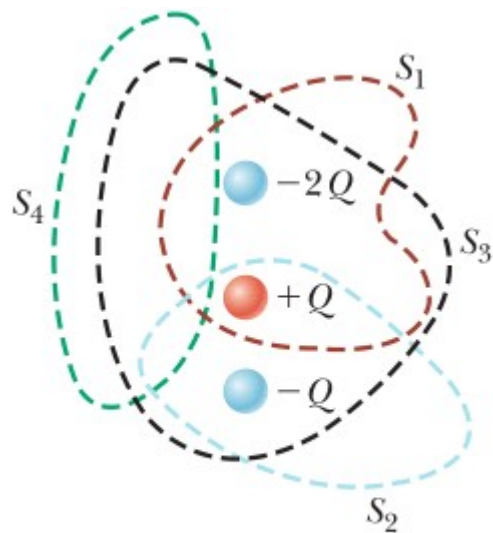


Figure P24.11