

23. Three point charges are located on a circular arc as shown in Figure P23.23. (a) What is the total electric field at P , the center of the arc? (b) Find the electric force that would be exerted on a -5.00-nC point charge placed at P .

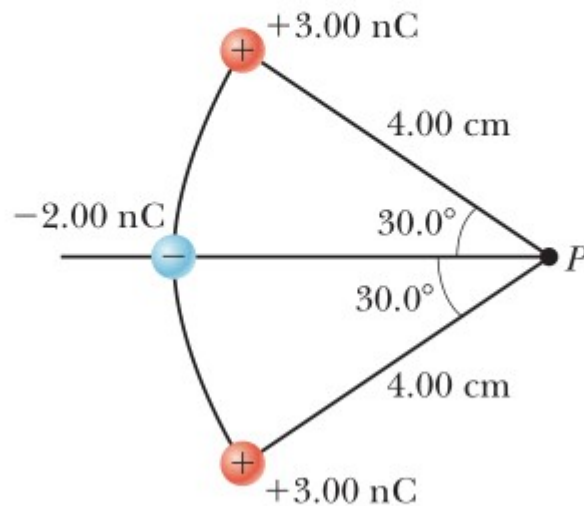


Figure P23.23

Name: _____

Date: _____

26. **S** Three point charges lie along a circle of radius r at angles of 30° , 150° , and 270° as shown in Figure P23.26. Find a symbolic expression for the resultant electric field at the center of the circle.

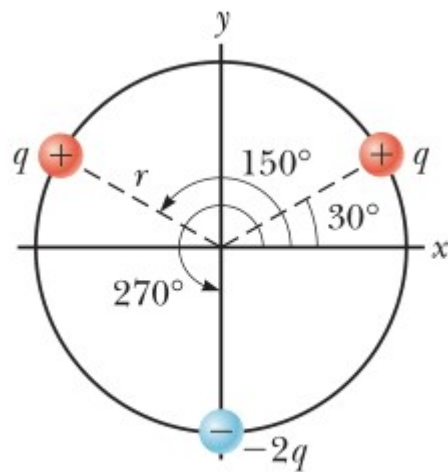


Figure P23.26

Name: _____

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29. A rod 14.0 cm long is uniformly charged and has a total charge of $-22.0 \mu\text{C}$. Determine (a) the magnitude and (b) the direction of the electric field along the axis of the rod at a point 36.0 cm from its center.

Name: _____

Date: _____

- 33. S** A continuous line of charge lies along the x axis, extending from $x = +x_0$ to positive infinity. The line carries positive charge with a uniform linear charge density λ_0 . What are (a) the magnitude and (b) the direction of the electric field at the origin?

Name: _____

Date: _____

41. Figure P23.41 shows the electric field lines for two charged particles separated by a small distance. (a) Determine the ratio q_1/q_2 . (b) What are the signs of q_1 and q_2 ?

(You will have to read the book for this one!)

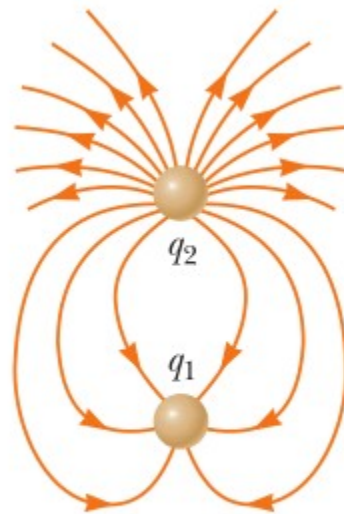


Figure P23.41