**Worksheet - Electric Fields on Multiple Charges**



1. Calculate the electric field strength midway between a 4.50 μC charged object and a -4.50 μC charged object if the two charges are 50 cm apart.
2. Calculate the electric field strength midway between a 3.0 μC charged object and a 6.0 μC object if they are 0.80 m apart.
3. Calculate the electric field strength midway between two 3.0 μC objects if they are 90 cm apart.
4. Two negatively charge spheres, A and B, are 30 cm apart and have the following charges of 3.0 x 10-6 C and 1.5 x 10-6 C as in the figure below. What is the net electric field at a point P, which is exactly in the middle between the two charges?

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1. What is the magnitude and direction of the electric field at point P in the figure below?

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Answers:

1. (1.30x106 N/C)
2. (1.7x105 N/C)
3. (0 N/C)
4. (6.0 x 105 N/C to the right)
5. (5.2 x 104 N/C to the left)