IB Physics
16 A-D Group Quiz

Name_____

Show your work, and circle your answers and use sig figs to receive full credit.

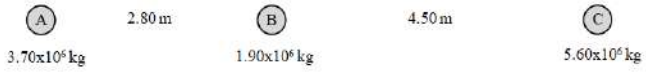
1. What is the force of attraction between a -10.1 μC charge and a +34.1 μC charge if their centers are 67.0 cm apart? Is it a force of attraction or repulsion?

2. Two point charges have a force of repulsion of 45.3 N when they are 2.30 m separated. What is the force of repulsion if they are separated by only 1.25 m?

3. 450. Kg wrecking ball experiences a force of attraction to a 5.10 kg shot of 6.30×10^{-10} N. What distance separates their centers?

4. Two point masses have a force of attraction of 2.30×10^{-12} N when they are separated by 56.0 cm. What is their separation if the force of attraction is 5.80×10^{-12} N?

5. Find the net force and direction on masses **A**, **B** and **C**:



A = _____

B = _____

C = _____

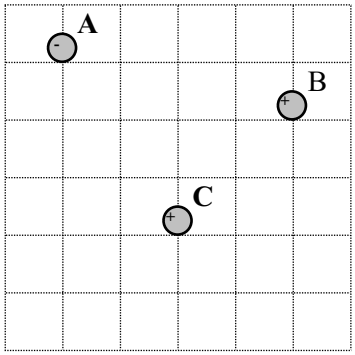
6. Find the net force and direction on charges **A, B** and **C**:

A = _____

B = _____

C = _____

7. Each grid line is a meter. Charge A is -430. μC, and charge B is +120. μC, and C is +780. μC. **Calculate the force on charge C**. Draw the force vector and label its magnitude and direction.



9. Each grid line is a meter. Mass A is 1.20×10^6 kg, and mass B is 3.10×10^6 kg, and C is 6.80×10^6 kg. **Calculate the force on mass A**. Draw the force vector and label its magnitude and direction.