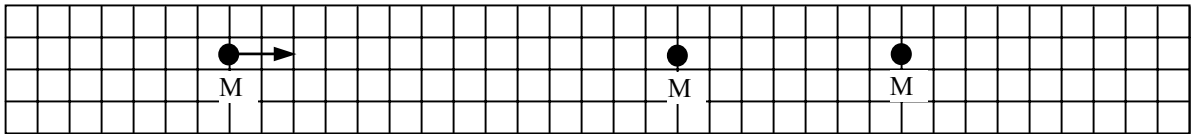


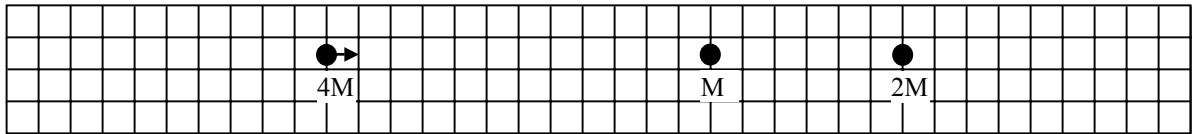
Physics 112
Quiz #2
August 28, 2000

Name _____

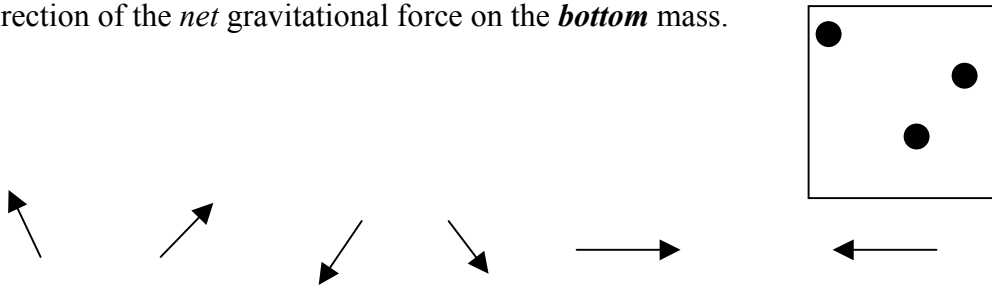
1. The arrow in the diagram shows the gravitational force on the *left* mass that is exerted by the *center mass only*. (All three masses are equal.) Draw an arrow on the diagram representing the net force on the center mass. (Please draw only one arrow on the diagram, to avoid confusion. Do scratch work *below* the diagram, if necessary.)



2. The arrow in the diagram shows the gravitational force on the *left* mass that is exerted by the *center mass only*. (The three masses are *not* equal.) Draw an arrow on the diagram representing the net force on the center mass. (Please draw only one arrow, to avoid confusion.)



3. Three spheres with equal mass are shown in the box. Circle the arrow that *most closely* represents the direction of the *net* gravitational force on the *bottom* mass.



4. A small object with mass m and a large object with mass M are separated by a distance r . The gravitational force on the large object is F . If the mass of the smaller object is *doubled*, and the mass of the larger object *remains unchanged*, at the same time that the separation distance is *cut in half*, what will be the new gravitational force on the large object?

- A. $8F$
- B. $4F$
- C. $2F$
- D. F
- E. $1/2 F$
- F. $1/4 F$
- G. $1/8 F$