

# Paper Homework No. 12 (Spring 2018)

## PHYS 205A: University Physics

Due date: Friday, 2018 May 4, 12.00pm, in class

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(Name)

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(Signature)

### Instructions

1. Your submission should include only this page. Other forms of submissions will not be accepted. Please print this page, and write your solution on the back side.
2. Show your thought process in detail and organize it clearly.
3. Make sure your answer has the correct units and the right number of significant digits.

### Question

Four objects of equal mass  $M$  are located at the corners of a square of edge length  $L$ . Find the magnitude and direction of the total gravitational force on any one of the mass. Express your answer in terms of  $G$ ,  $M$ , and  $L$ . Assume that the four objects are isolated from all other objects.