

# Group Quiz 2

Tuesday, March 11, 2008

Mathematics for Business

22M:013:SCA TTh 6:00 - 8:00 PM

Instructor: Matt Stoeckel

**Name:**

You may use your book. You have 30 minutes.

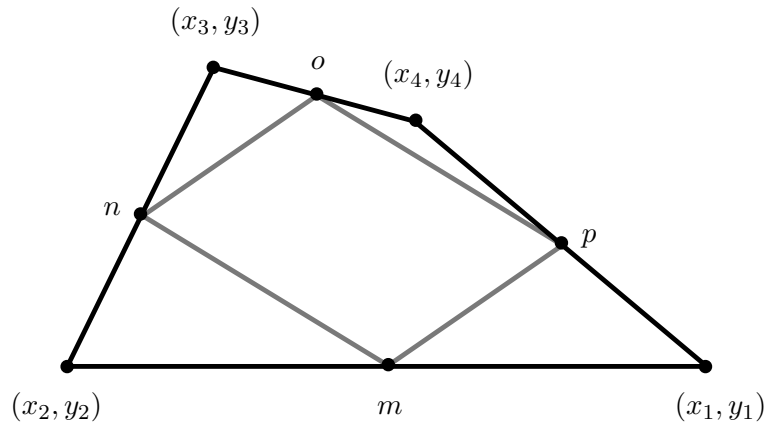


Figure 1: A quadrilateral with vertices  $(x_1, y_1)$ ,  $(x_2, y_2)$ ,  $(x_3, y_3)$  and  $(x_4, y_4)$ .

1. Let  $(x_1, y_1)$ ,  $(x_2, y_2)$ ,  $(x_3, y_3)$  and  $(x_4, y_4)$  be distinct vertices of a quadrilateral. Let  $m$  be the midpoint of the side of the quadrilateral with endpoints  $(x_1, y_1)$  and  $(x_2, y_2)$ ,  $n$  the midpoint of the side with endpoints  $(x_2, y_2)$  and  $(x_3, y_3)$ ,  $o$  the midpoint of the side with endpoints  $(x_3, y_3)$  and  $(x_4, y_4)$ ,  $p$  the midpoint of the side with endpoints  $(x_4, y_4)$  and  $(x_1, y_1)$  as shown in Figure 1. Carefully show that the figure  $mnop$  is a parallelogram.