MATH 20C, SECTION A06   October 14, 2014
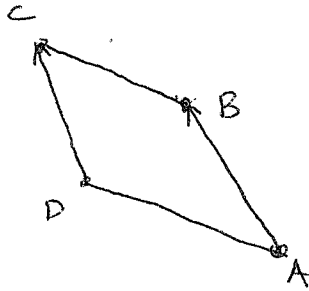
Quiz 1

Show all your work for full credit. To maximize credit, cross out incorrect work.
No credit will be given for unsupported answers.

1. (10 points) Let

$$A = (a, 1), B = (2, b), C(-1, 7), D = (1, 3).$$

Find the values of a and b for which $ABCD$ is a parallelogram.

C

B

D

A

Since ABCD is a parallelogram,

$\overrightarrow{AB} = \overrightarrow{DC}$.

Therefore $\langle 2-a, b-1 \rangle = \langle -2, 4 \rangle$

$\Rightarrow$ $\boxed{a = 4, \ b = 5}$

Good luck! ☺