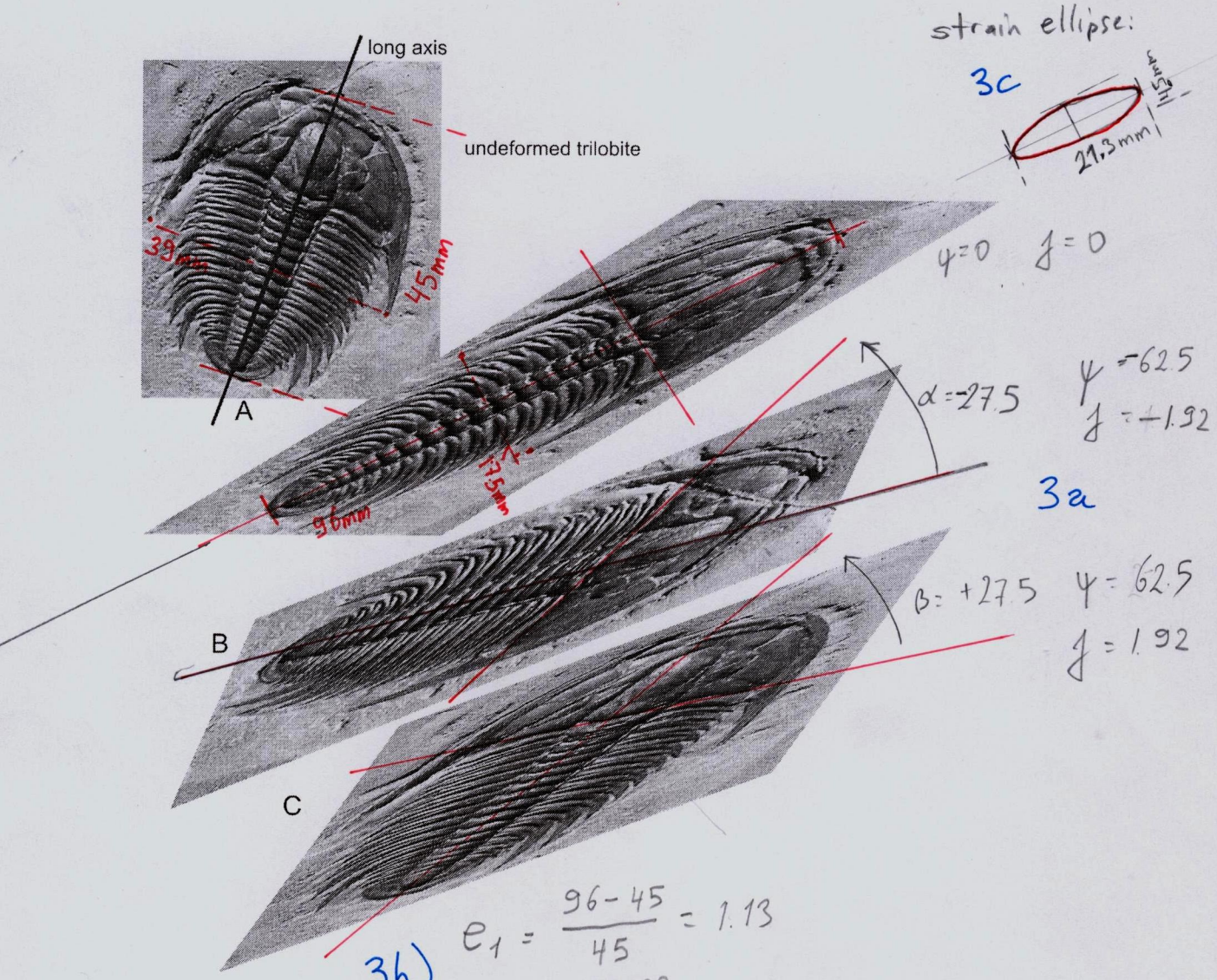
STRUCTURAL GEOLOGY
Mid-Term Exam Questions
24th March 2010

1. Draw beta projections of the planes 134/62SW and 112/75NW. Find out the trend and plunge of the intersection of these planes. Draw a projection of the lines 13/86NE and 176/08S.

2. Explain the following terms with the help of diagrams:
pure shear, stylolite, antiform, crenulation cleavage, boudinage, cylindrical fold, mineral lineation

3. In the photo below there are photographs of three deformed trilobites and one undeformed trilobite.
a) Assuming that the deformation is by simple shear, find out the angular shear strain and shear strain along the long axis of the trilobite for the deformed trilobites A, B and C.
b) Assuming that thedeformed trilobites has the same initial size and shape as the deformed trilobites, calculate e_1 and e_2 values.
c) Draw a strain ellipse representing the finite deformation associated with the deformed trilobites. Hint: the only lines that are perpendicular before and after deformation correspond to the principal axis of the finite strain ellipse.



ARAL OKAY

answer to question 1