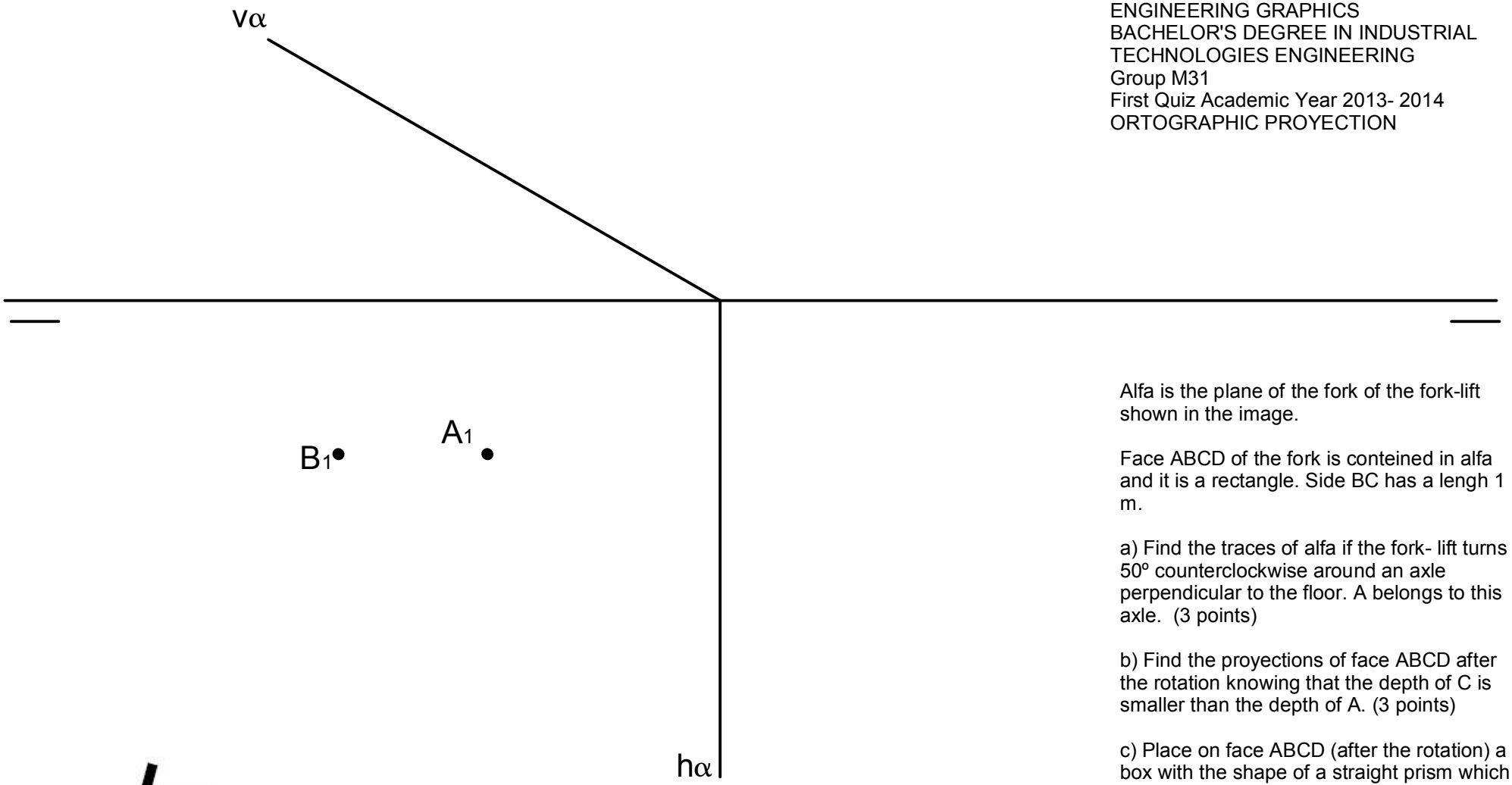
UNIVERSIDAD CARLOS III DE MADRID ESCUELA POLITÉCNICA SUPERIOR	Mechanical Engineering Department Engineering drawing	Last Name..... Name..... Group.....



ENGINEERING GRAPHICS
BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGIES ENGINEERING
Group M31
First Quiz Academic Year 2013- 2014
ORTOGRAPHIC PROYECTION

Alfa is the plane of the fork of the fork-lift shown in the image.

Face ABCD of the fork is conteined in alfa and it is a rectangle. Side BC has a lengh 1 m.

a) Find the traces of alfa if the fork- lift turns 50º counterclockwise around an axle perpendicular to the floor. A belongs to this axle. (3 points)

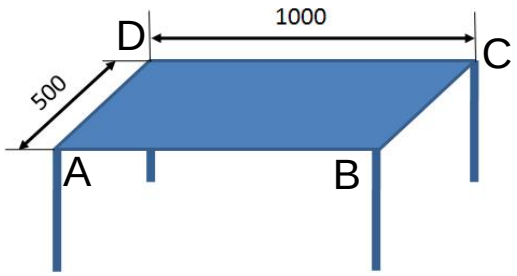
b) Find the proyections of face ABCD after the rotation knowing that the depth of C is smaller than the depth of A. (3 points)

c) Place on face ABCD (after the rotation) a box with the shape of a straight prism which base is exactly face ABCD and its height is 1 m (4 points)

IMPORTANT: DRAWING IS AT SCALE 1:50

Last Name.....
Name..... Group.....

ENGINEERING DRAWING
Industrial Engineering
Group M39
First Quiz Academic Year 2013- 2014
Orthographic projection



Imagine that the drawn line segment is one of the table legs that is shown in the figure above.

Find:

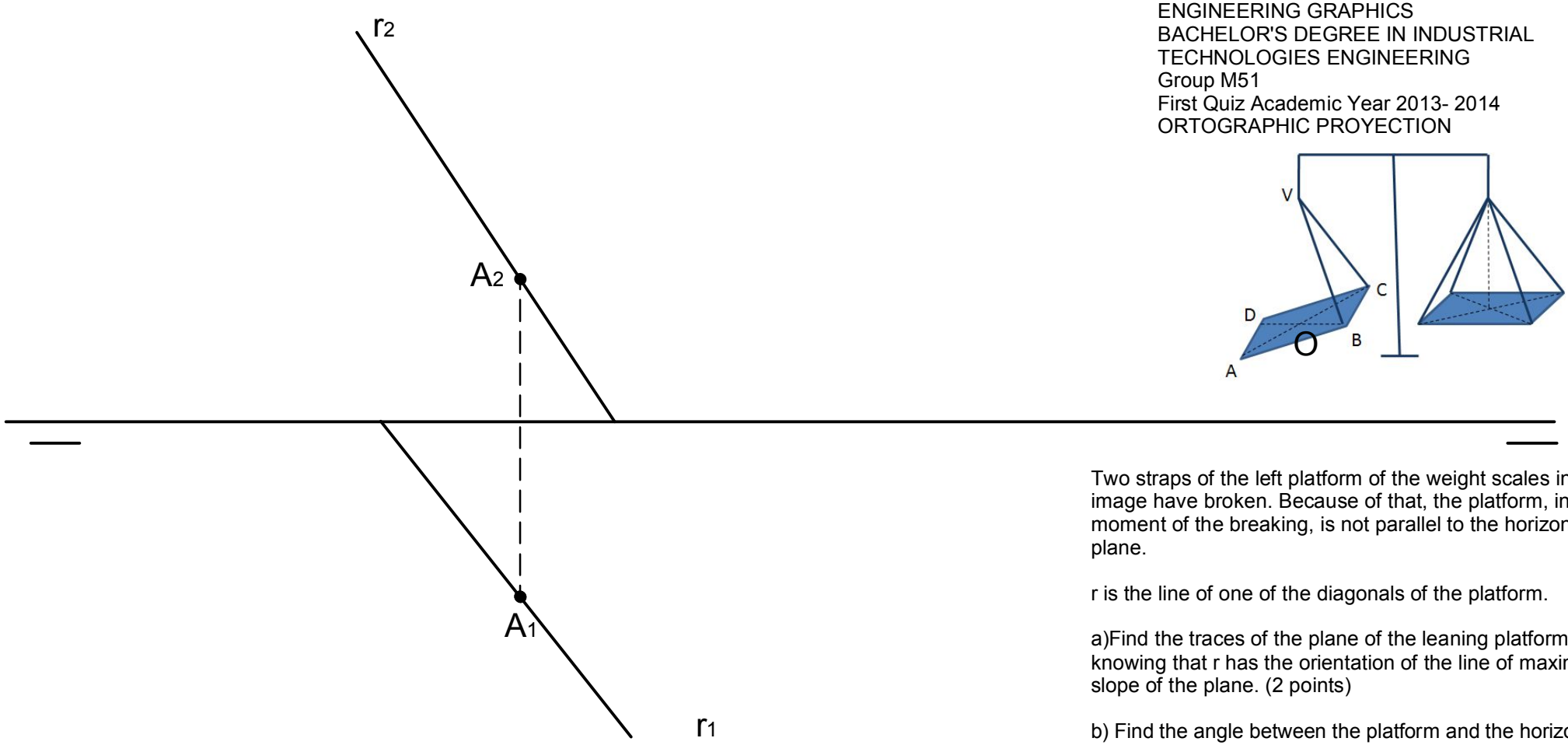
a) The projection of the table surface ABCD knowing that:
-AB is a horizontal line.
-B is of less depth than A.
-A is of more height than D. (4 points)

b) The projections of the four table legs knowing that they are 500 mm long and that they are situated towards the floor. (3 points)

c) The angle between the table surface and the horizontal plane. (3 points)

IMPORTANT: The given drawing is at a scale of 1:20

Last Name.....
Name..... Group.....



ENGINEERING GRAPHICS
BACHELOR'S DEGREE IN INDUSTRIAL TECHNOLOGIES ENGINEERING
Group M51
First Quiz Academic Year 2013- 2014
ORTOGRAPHIC PROYECTION

Two straps of the left platform of the weight scales in the image have broken. Because of that, the platform, in the moment of the breaking, is not parallel to the horizontal plane.

r is the line of one of the diagonals of the platform.

a)Find the traces of the plane of the leaning platform knowing that r has the orientation of the line of maximun slope of the plane. (2 points)

b) Find the angle between the platform and the horizontal plane (2 points)

c) Find the proyections of the platform knowing that it is a square, its diagonals are 400 mm long and A is the point of the platform with the smaller height. (3 points)

d) Place point V knowing that OV is 300 mm long and it is perpendicular to the platform plane. (3 points)

IMPORTANT: THE EXERCISE IS AT SCALE 1:10