

TAKE NOTE: The dates of the third midterm and of the final on the syllabus are wrong. The correct dates are:

Third midterm on Monday April 18 (5:30 - 6:30),

Final on Monday May 9 at 7:25.

Math 113

EXAM I, Feb. 14, 2005, (50 minutes).

NAME:

SECTION:

Instructor:

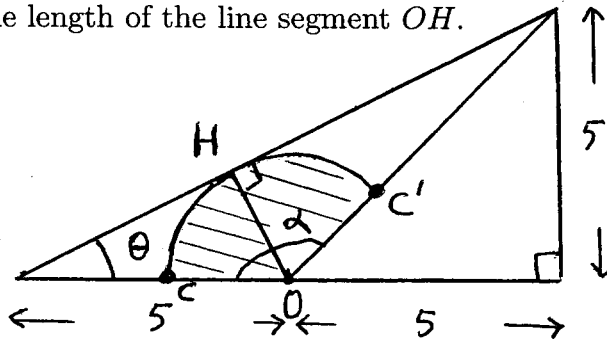
I	II	III	IV	TOTAL
30	30	30	30	120

TO RECEIVE CREDIT FOR AN ANSWER,
YOU MUST SHOW WORK JUSTIFYING THAT ANSWER.

I. (NO CALCULATOR)

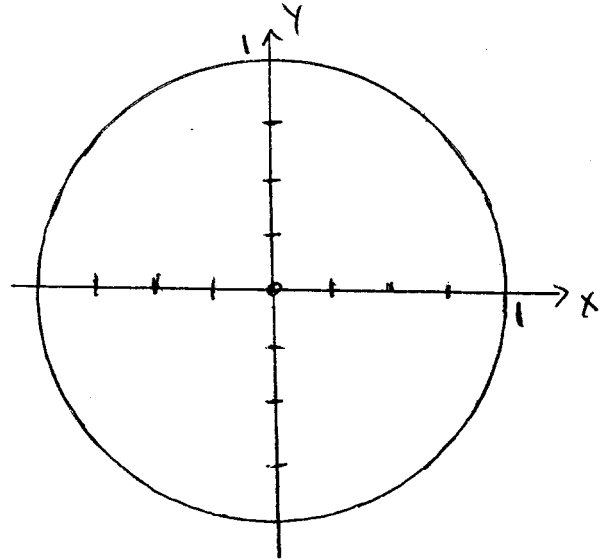
(30 points)

Give the EXACT values of: $\cos \theta$, $\sin \theta$, $\tan \theta$ and the length of the line segment OH .

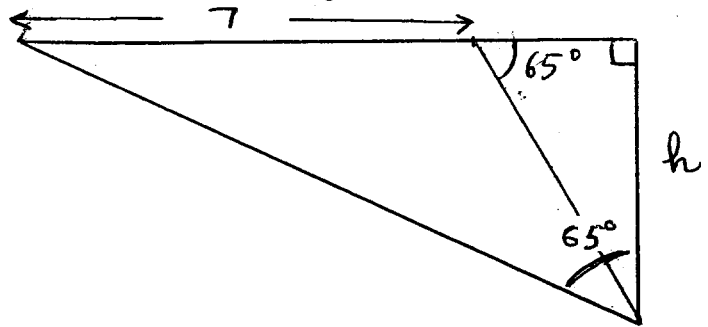


Give the exact value of the angle α in degrees and in radians. Give the exact values of the area of the shaded region, and of the length of the arc of circle from C to C' . The circle, whose arc is shown of the figure, has its center at O .

II. (NO CALCULATOR) (30 points) On the figure, show the possible terminal sides for an angle θ in standard position, such that $\cos \theta = -\frac{1}{4}$. For each of these terminal sides, give the corresponding values of $\sin \theta$ and $\tan \theta$. Keep exact values.

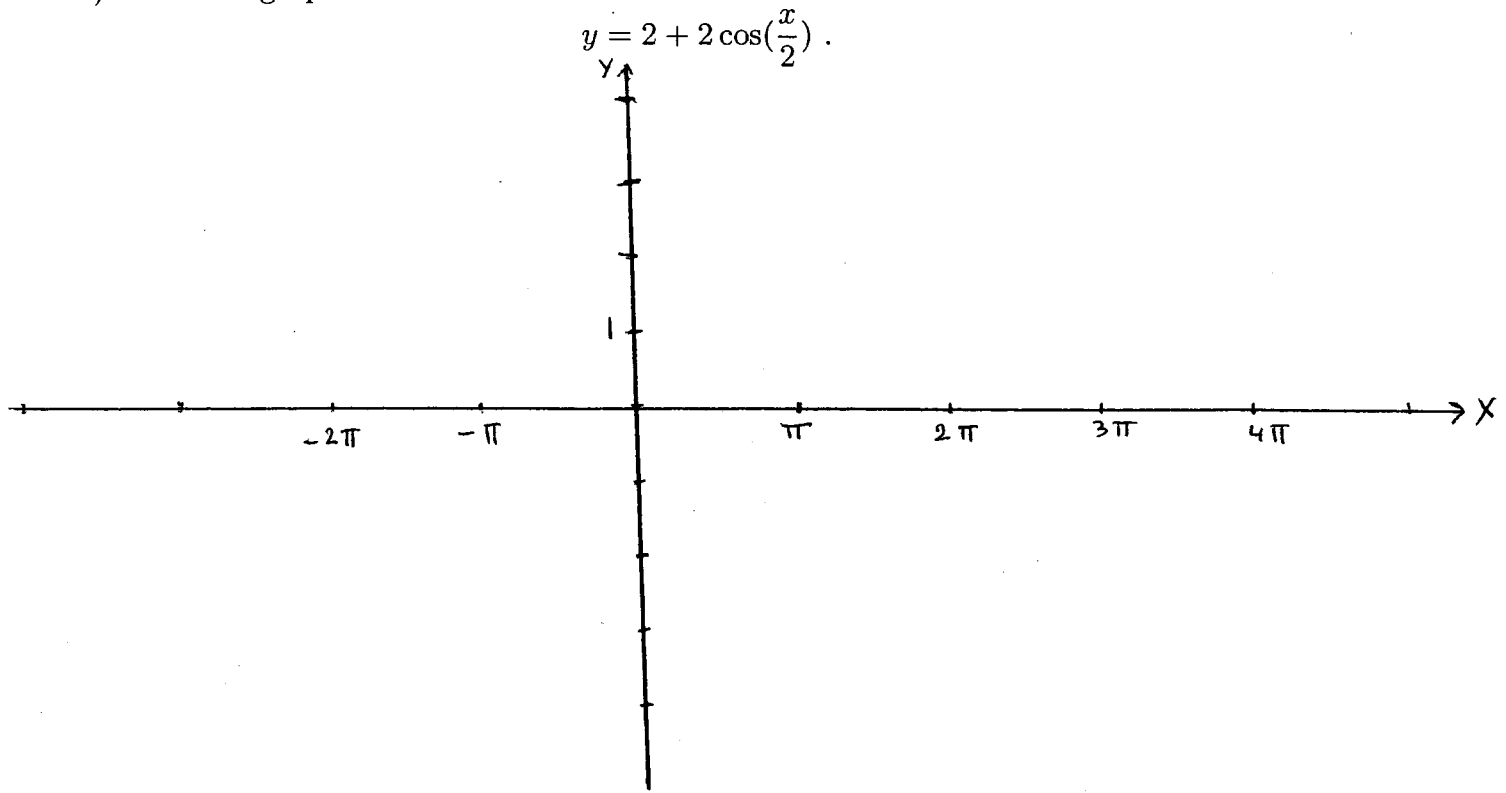


III. (30 points) Evaluate the length h . *Method imposed: Solve this problem with the tools of Chapter 2 (Right Triangles, definition of sine, cosine and tangent). Do not use tools such as the law of sines and the law of cosines to be seen in Chapter 9.*



IV. (30 points)

1) Draw the graph of



2) If this is the graph of $y = A \sin 3x + B$, evaluate A and B and the coordinates (x, y) of the point P on the graph.

