



ESCOLA E. B. 2,3/S Dr. DANIEL DE MATOS

10º Ano
Ano letivo 2014/2015
Matemática A

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Worksheet nº 11

“From the forest ... to your home”

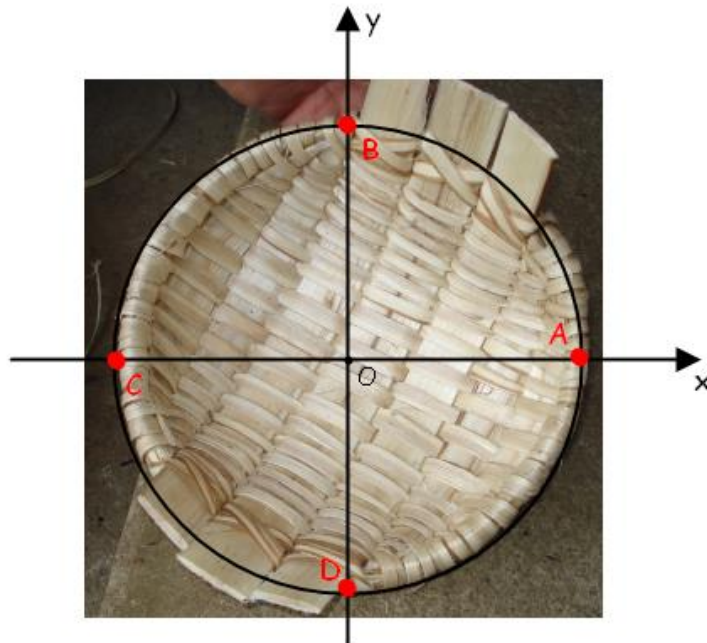


These pictures are part of a work made by the student Emília Duarte, from the class 10^ºA, which is going to be presented in the project “Our forests, our future”. Here are represented some of the phases of the process of basketry, since the forest to the last product. The production was made by a craftsman from Vila Nova de Poiares, Mr. Júlio Pereira.

The final product is this beautiful basket, as you can see in picture 1, which has in the top a circumference form.

That circumference is centered in the point O. The points A, B, C and D belong to the circumference and as you can see, A and C belong to the Ox-axis and B and D to Oy-axis.

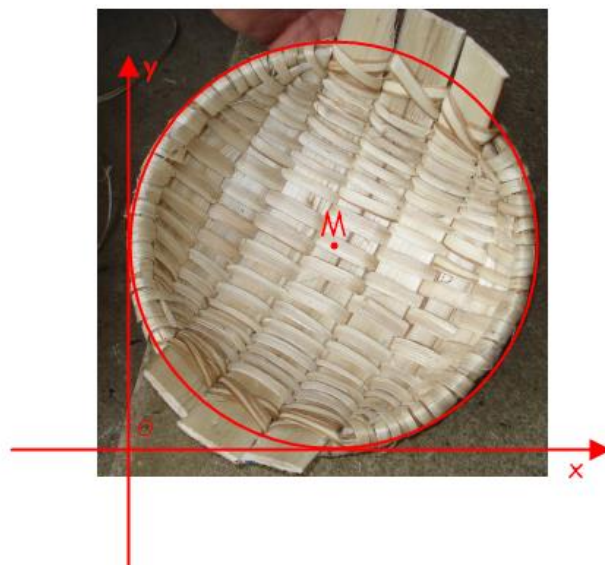
The diameter is 20cm.



Picture 1

- Indicate the coordinates of the points marked in the picture;
- Write the condition that defines the circumference;
- Write the condition that defines the circle.

Now, observe attentively the picture 2.

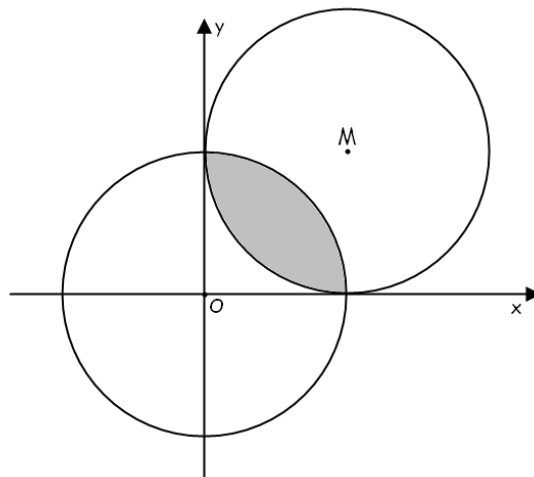


Picture 2

In this new reference

- Indicate the coordinates of the points of the circumference, tangent to the coordinated axis;
- Write the condition that defines the circumference;
- Write the condition that defines the circle.

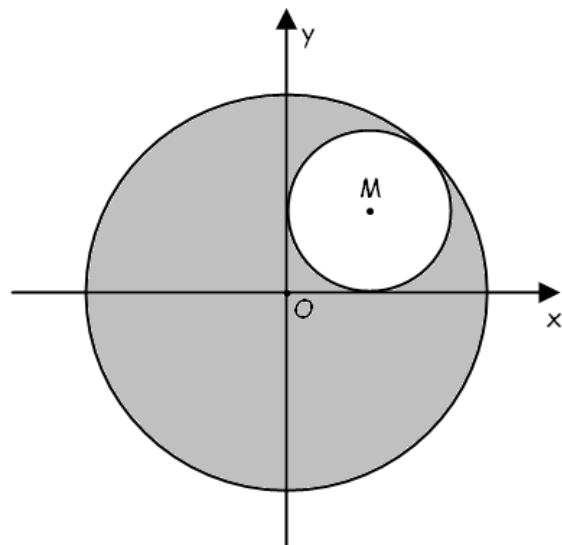
Using the two circumferences, in a new reference, define by a condition the set of points shaded in the picture 3



Picture 3

Consider in the picture 4, the circumference with bigger radius, the one defined by the basket. The circumference of lower radius is tangent to the coordinated axis and tangent to the bigger circumference.

Write the condition that defines the shaded area.



Picture 4

Teacher Ana Maria S. L. Baptista