

2<sup>a</sup>  
SÉRIE

# CANAL SEDUC-PI2



PROFESSOR (A):

ALEXANDRO  
KESLLER



DISCIPLINA:

MATEMÁTICA



AULA Nº:

09



CONTEÚDO:

CIRCUNFERÊNCIA  
TRIGONOMÉTRICA



TEMA GERADOR:



DATA:

27/05/2020

## ROTEIRO DE AULA

### *Circunferência Trigonométrica*

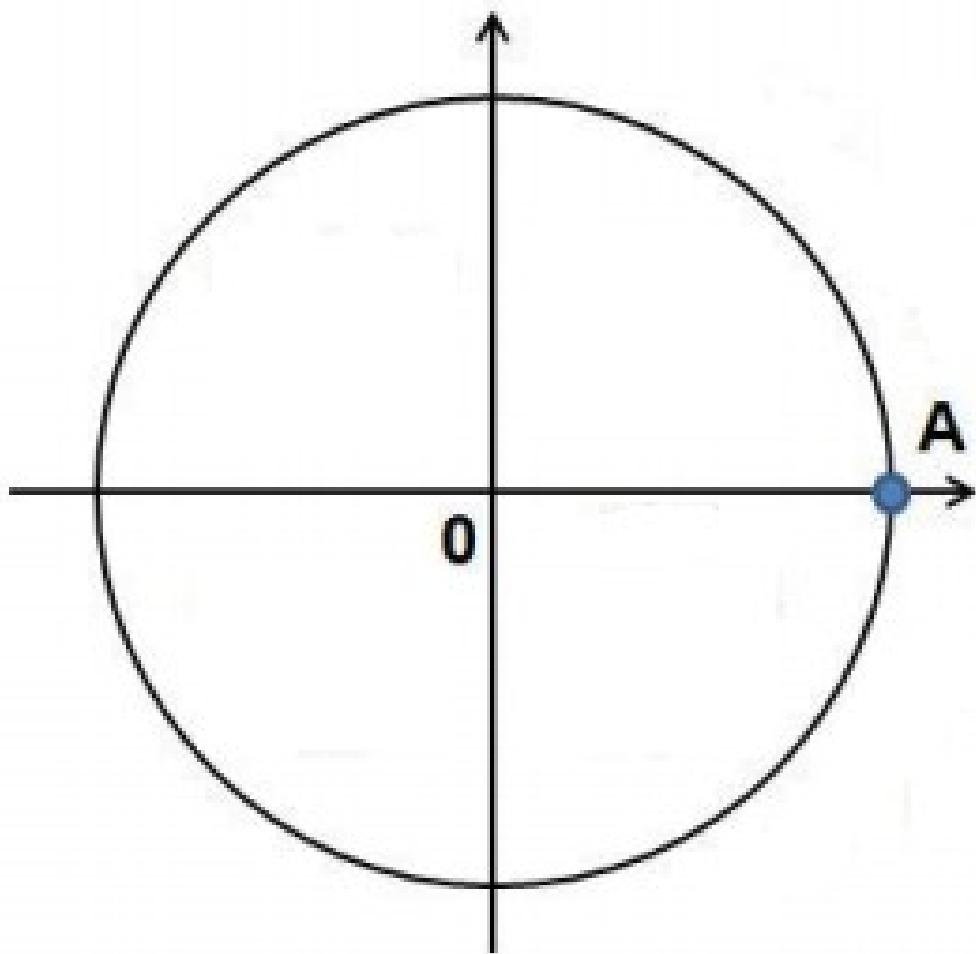
- Arcos congruos;***
- 1<sup>a</sup> Determinação Positiva***

SENAI  
EDUCAÇÃO  
PROGRAMA DE MEDIÇÃO TECNOLÓGICA

# Arcos Congruos

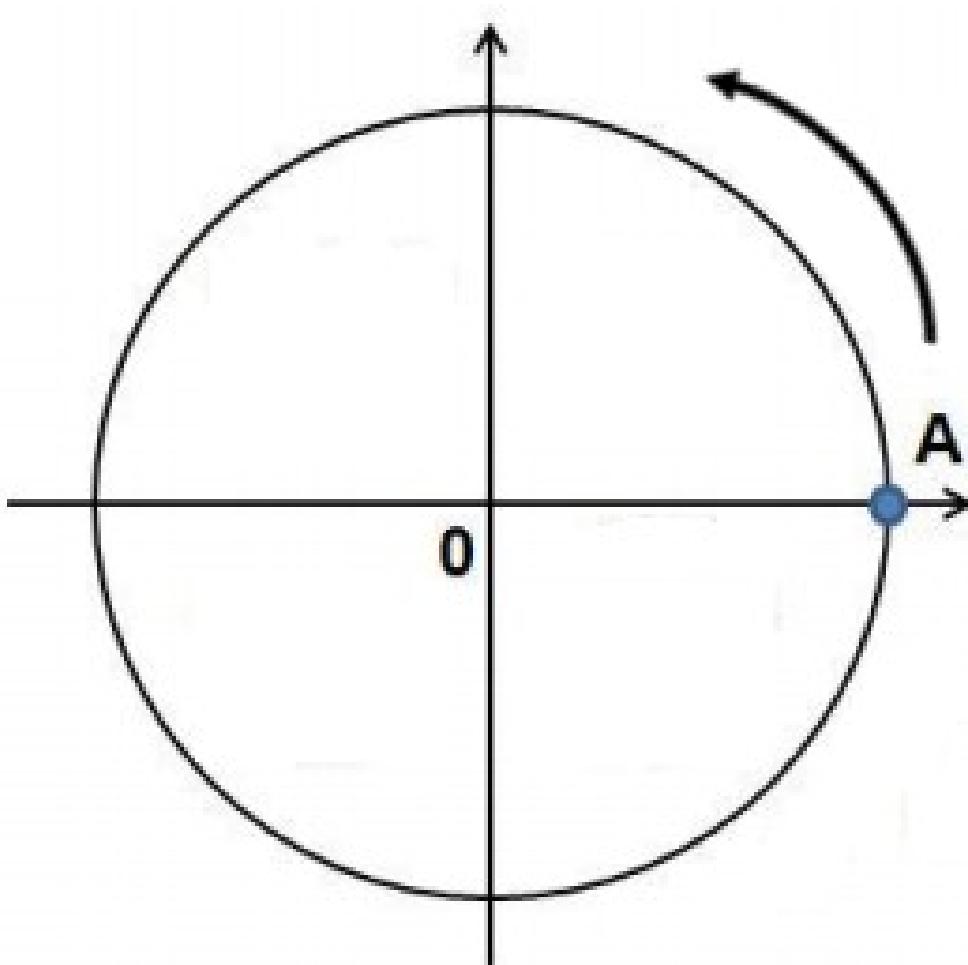
Canal  
educação  
PROGRAMA DE MEDIÇÃO TÉCNICA

# Arcos Côngruos



Canal  
Educação  
PROGRAMA DE MEDIÇÃO DA UNIDADE

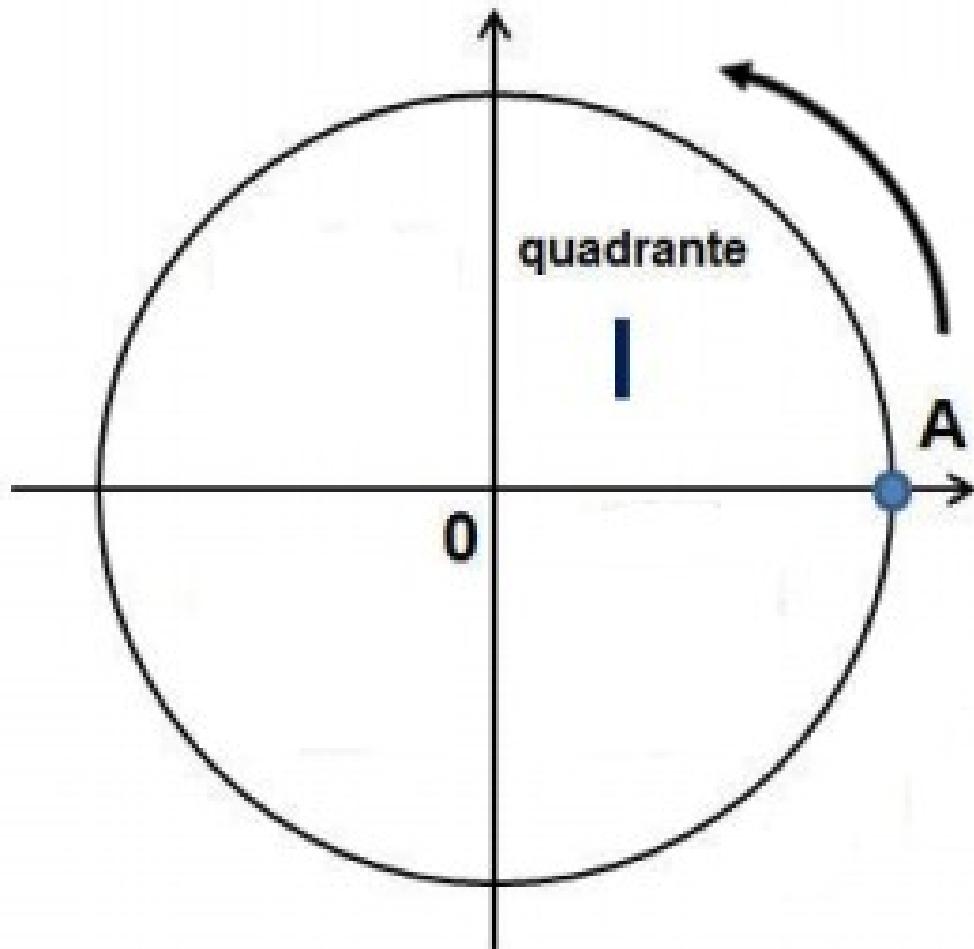
# Arcos Côngruos



+ sentido anti-horário

Canal  
Educação  
PROGRAMA DE MEDAÇÃO FUNDAMENTAL

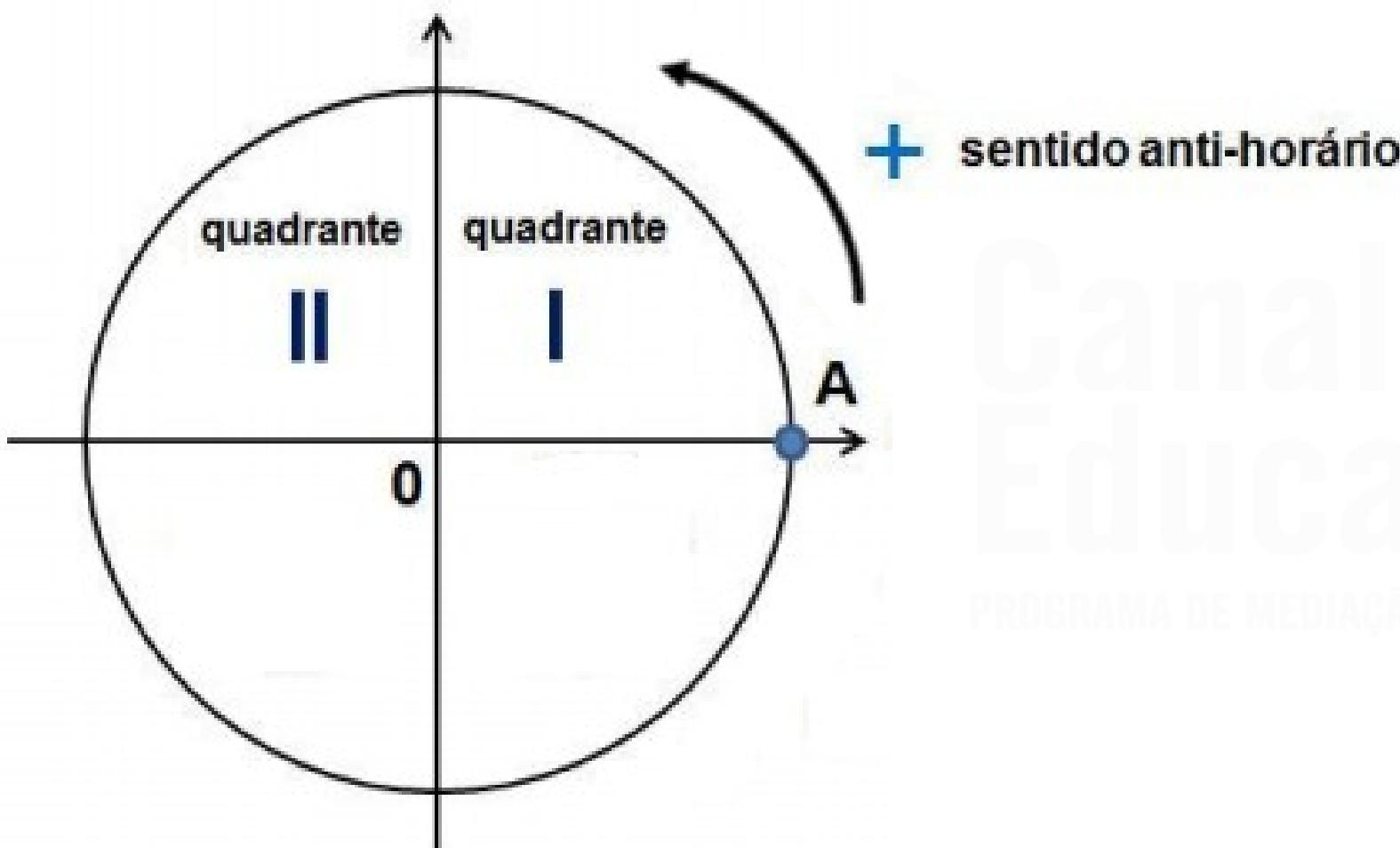
# Arcos Congruos



+ sentido anti-horário

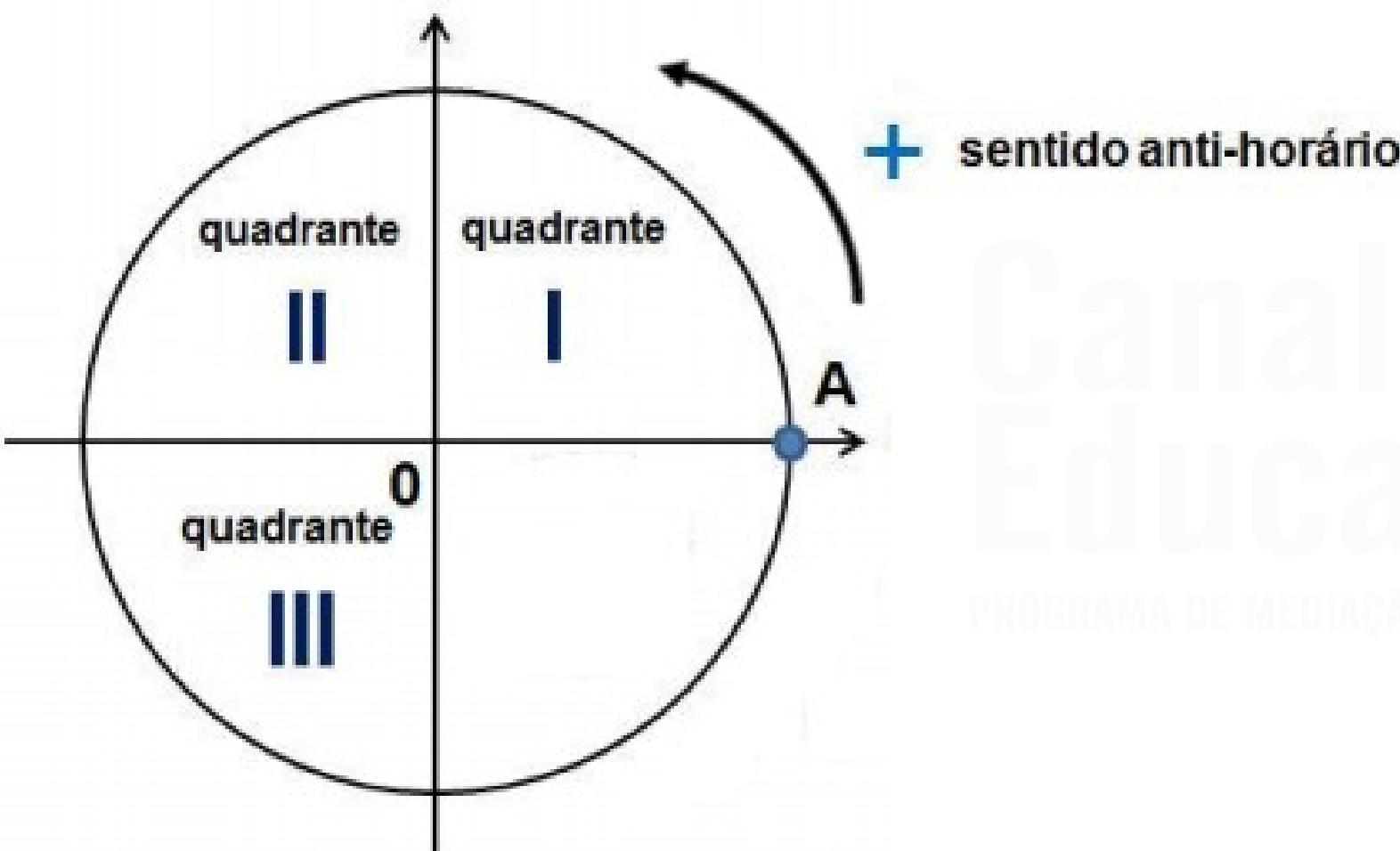
Canal  
Educação  
PROGRAMA DE MEDAÇÃO FUNDAMENTAL

# Arcos Congruos



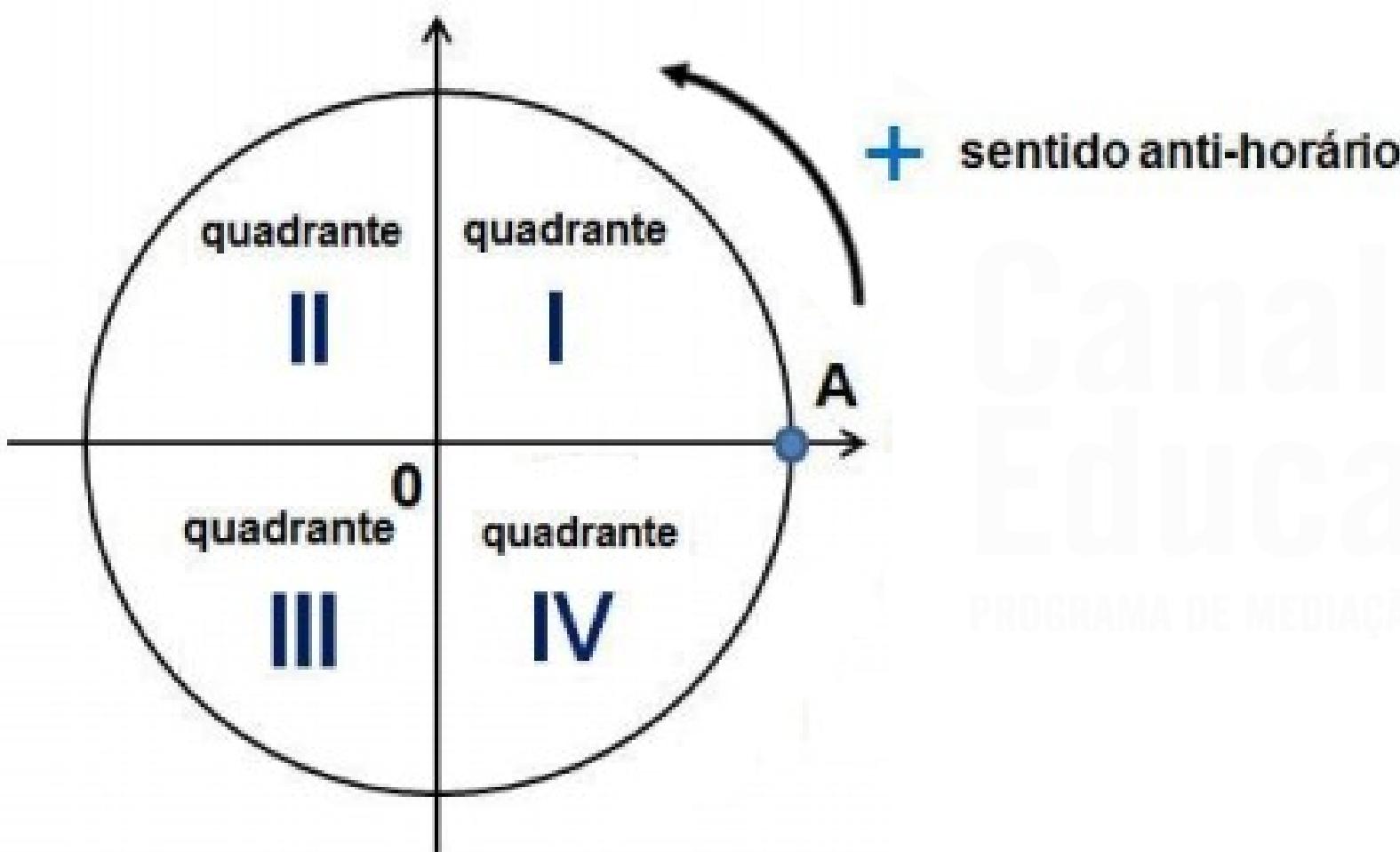
Ganha  
educação  
PROGRAMA DE MEDAÇÃO FONDÉSICA

# Arcos Congruos



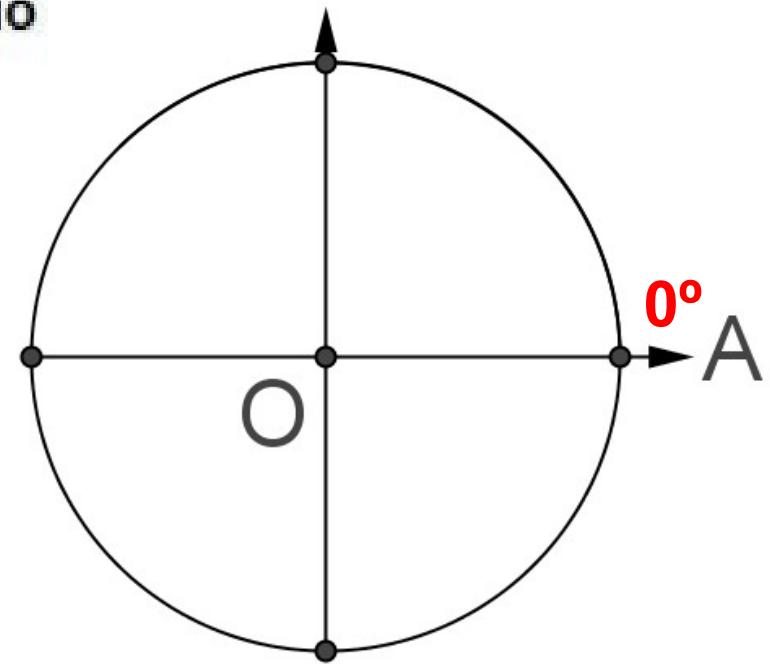
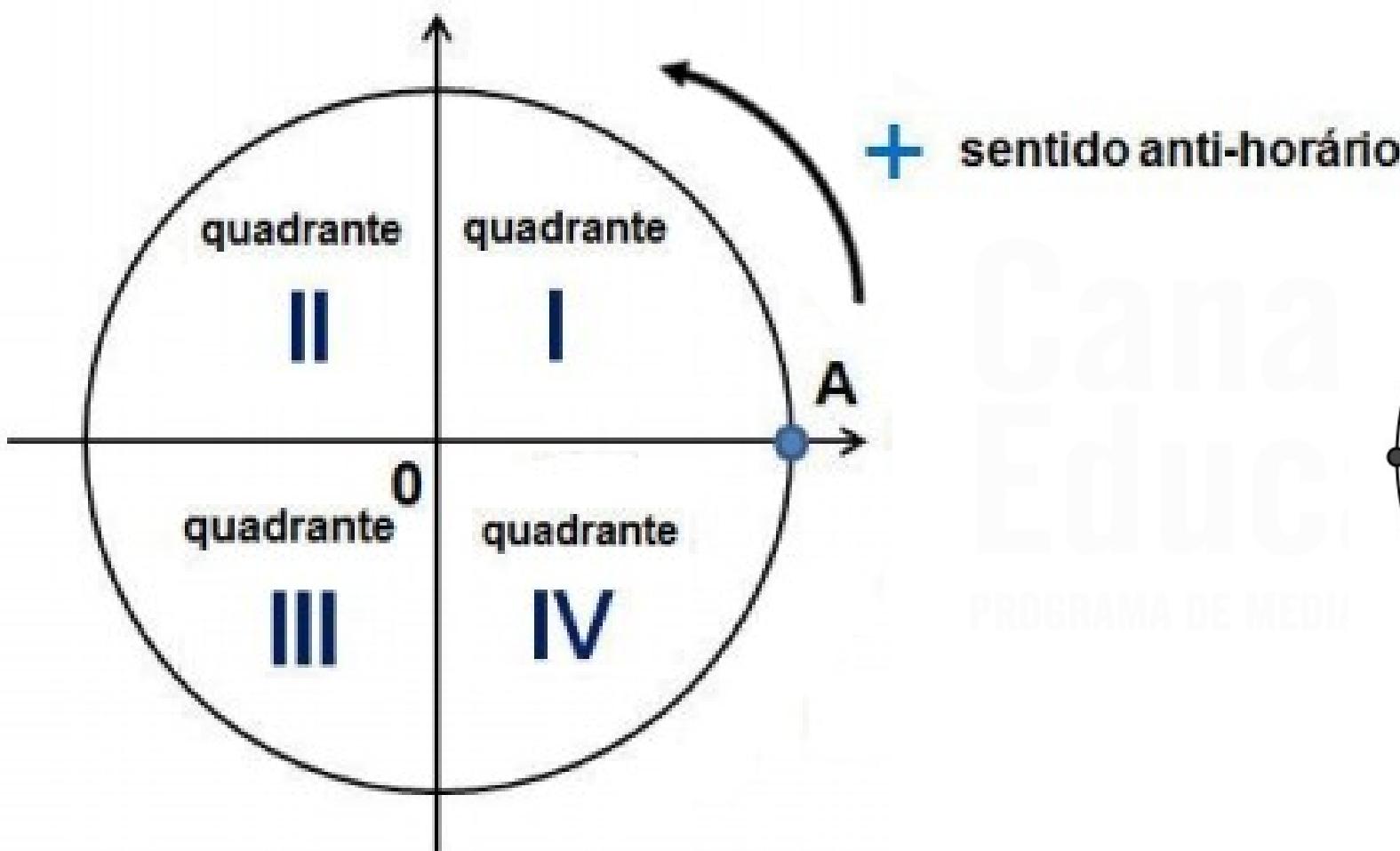
Ganha  
educação  
PROGRAMA DE REDEAÇÃO FEDERATIVA

# Arcos Congruos

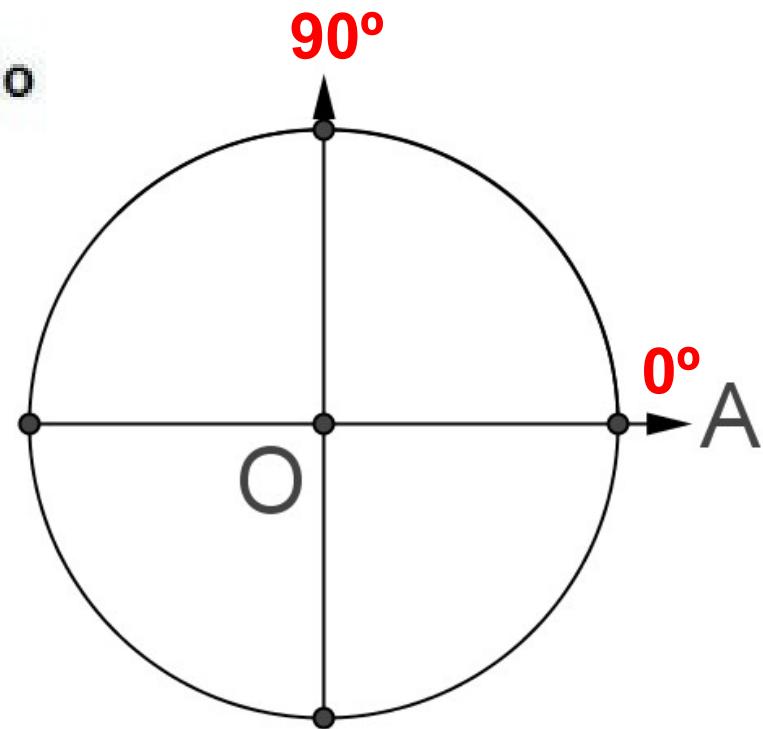
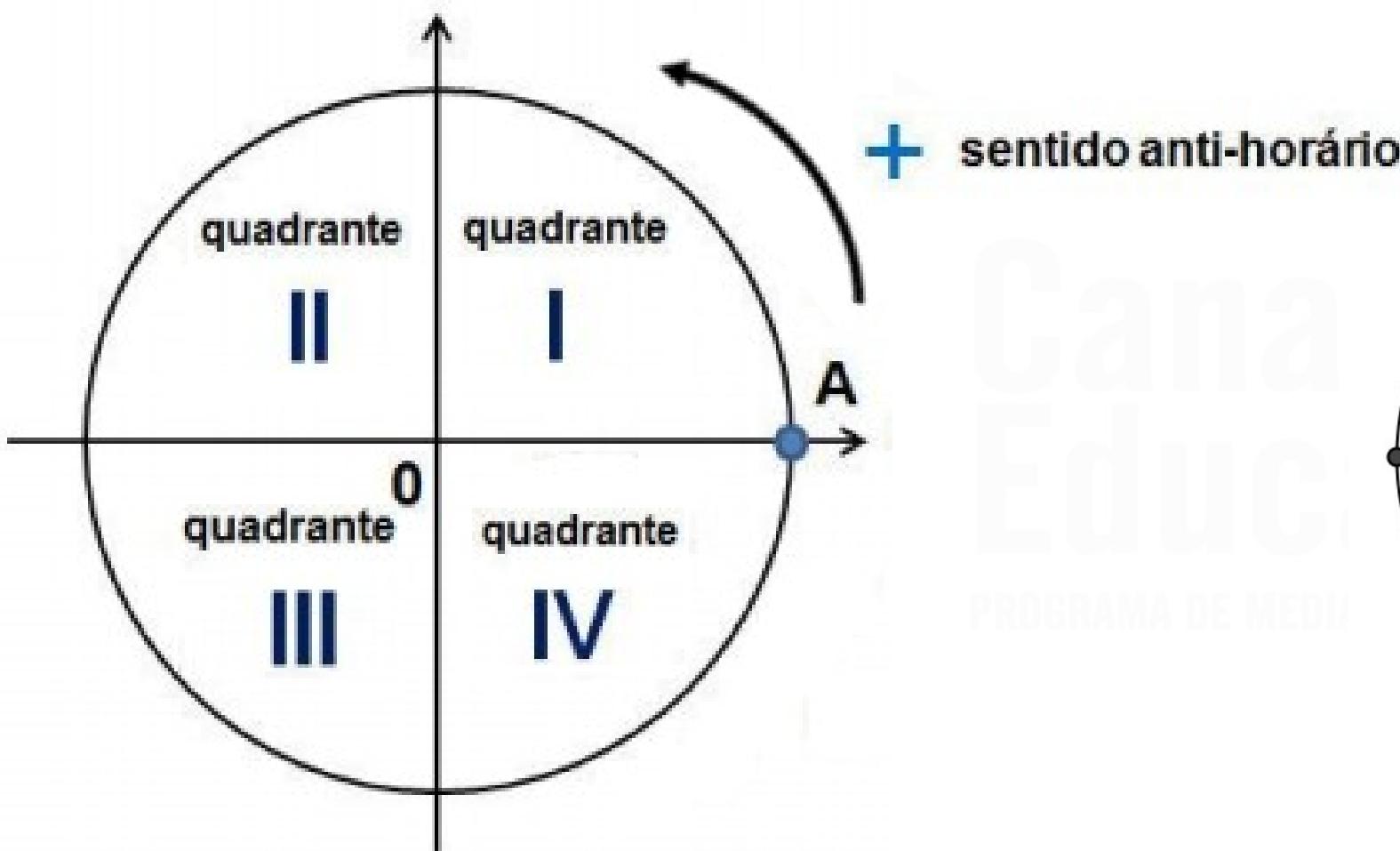


Canal  
educação  
PROGRAMA DE MEDAÇÃO FUNDÍCIA

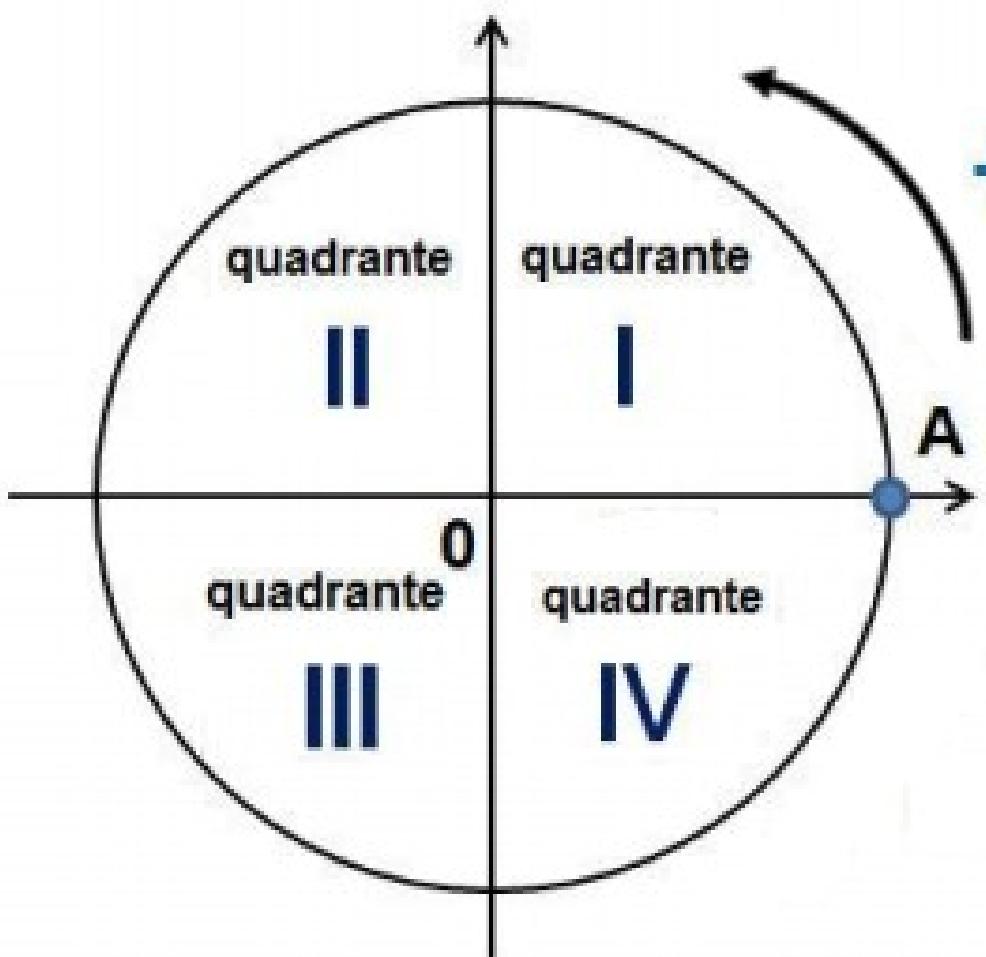
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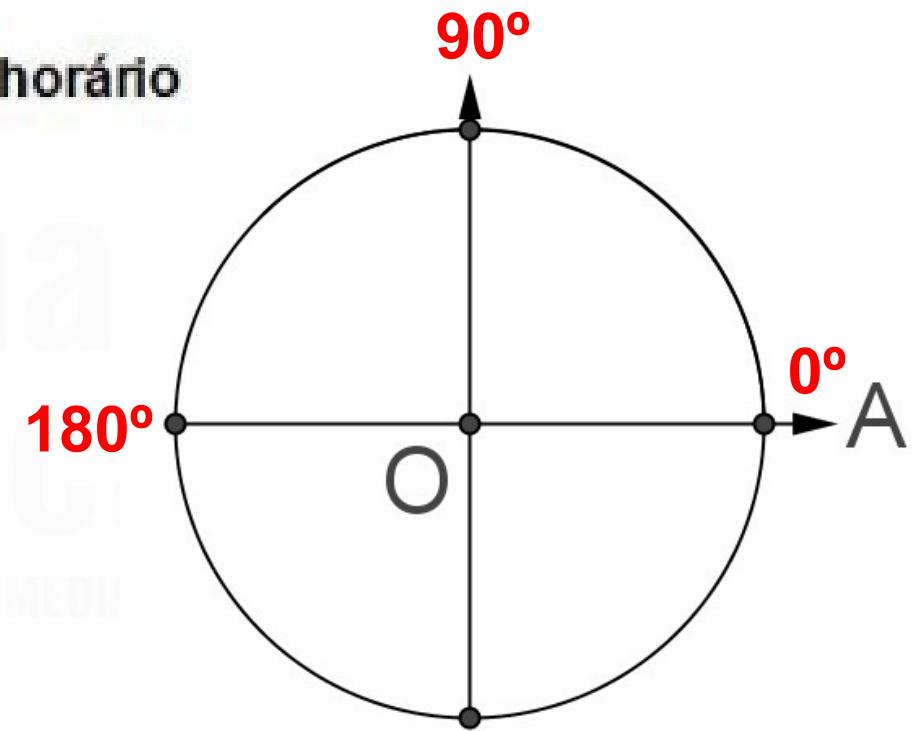
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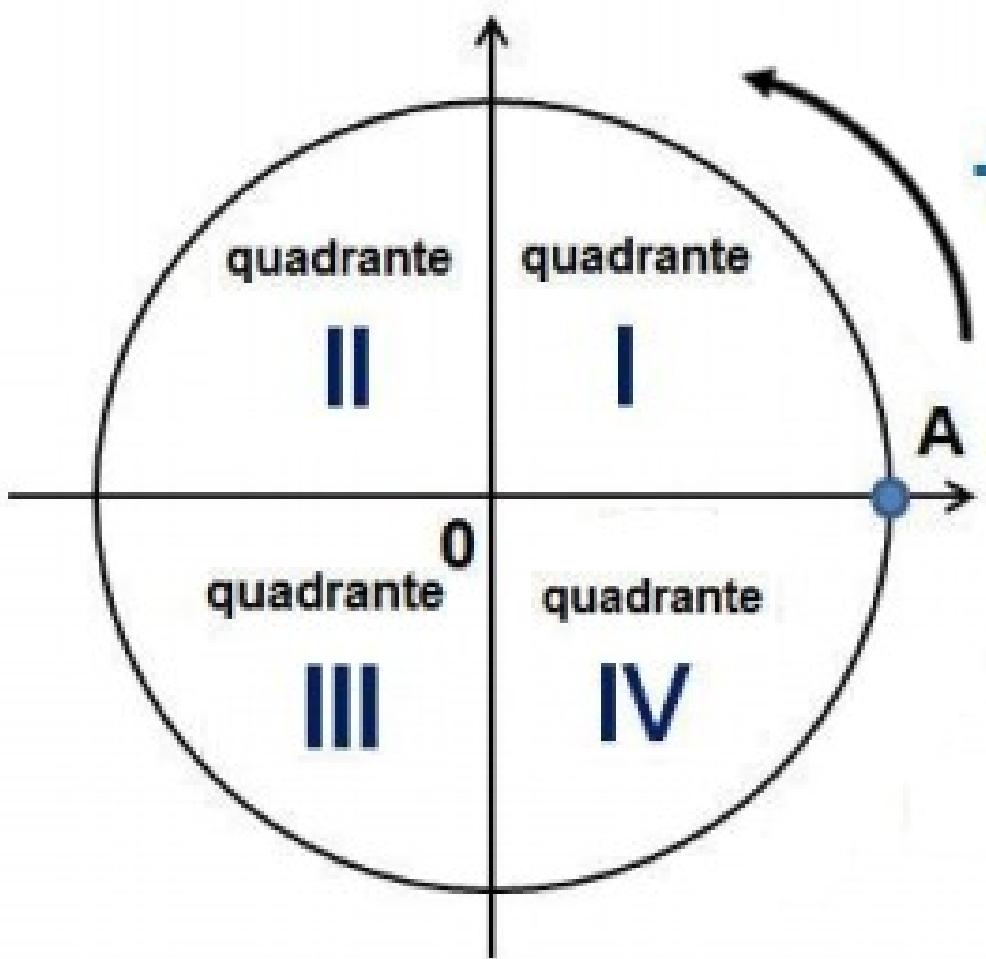
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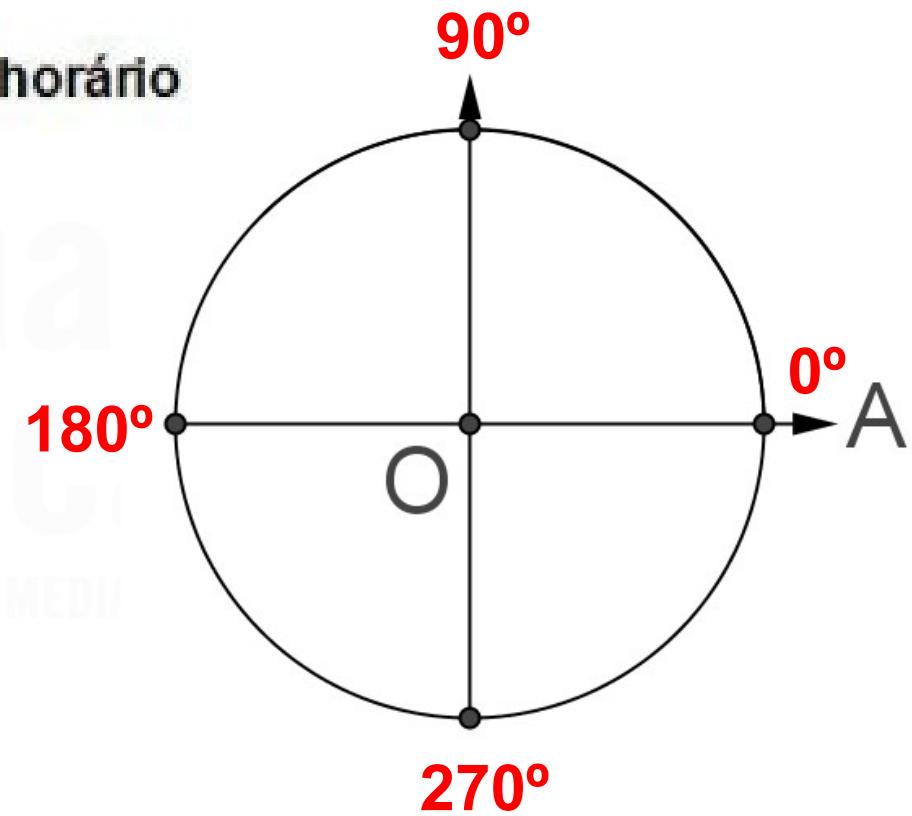
sentido anti-horário



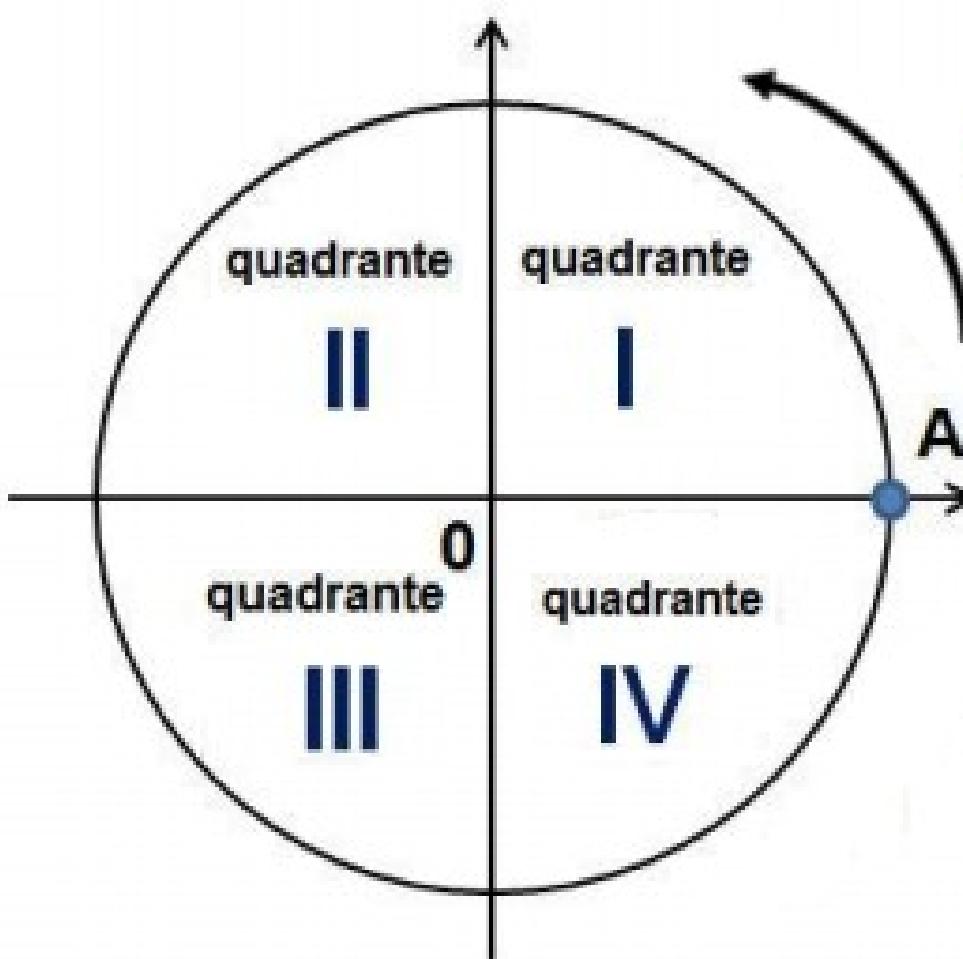
# Arcos Côngruos



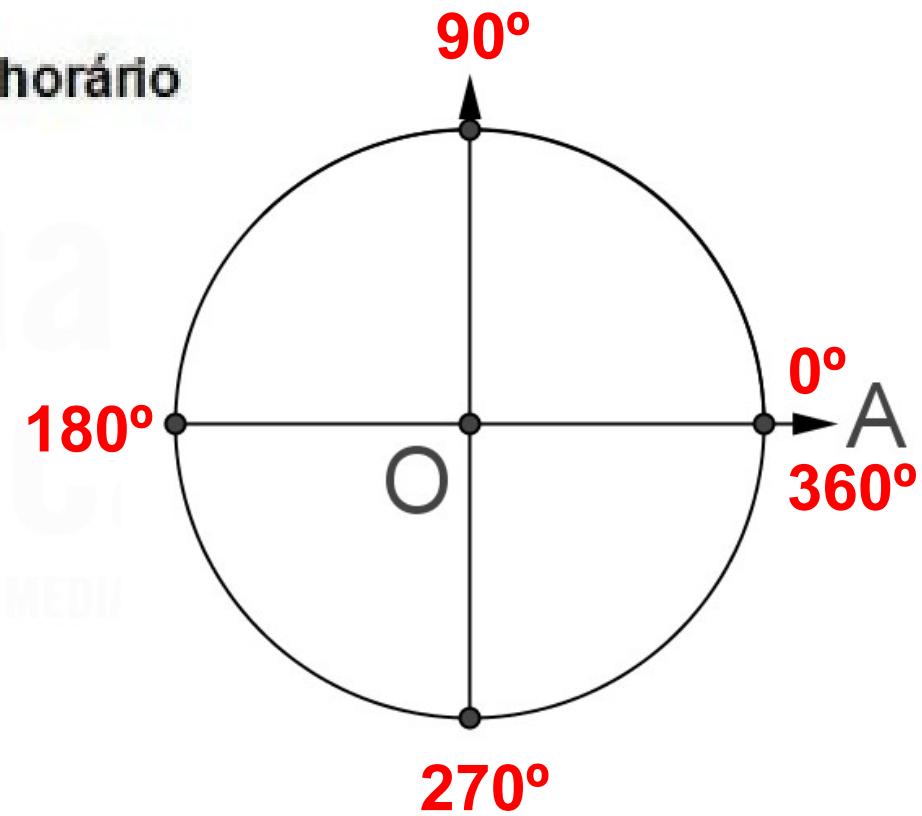
sentido anti-horário



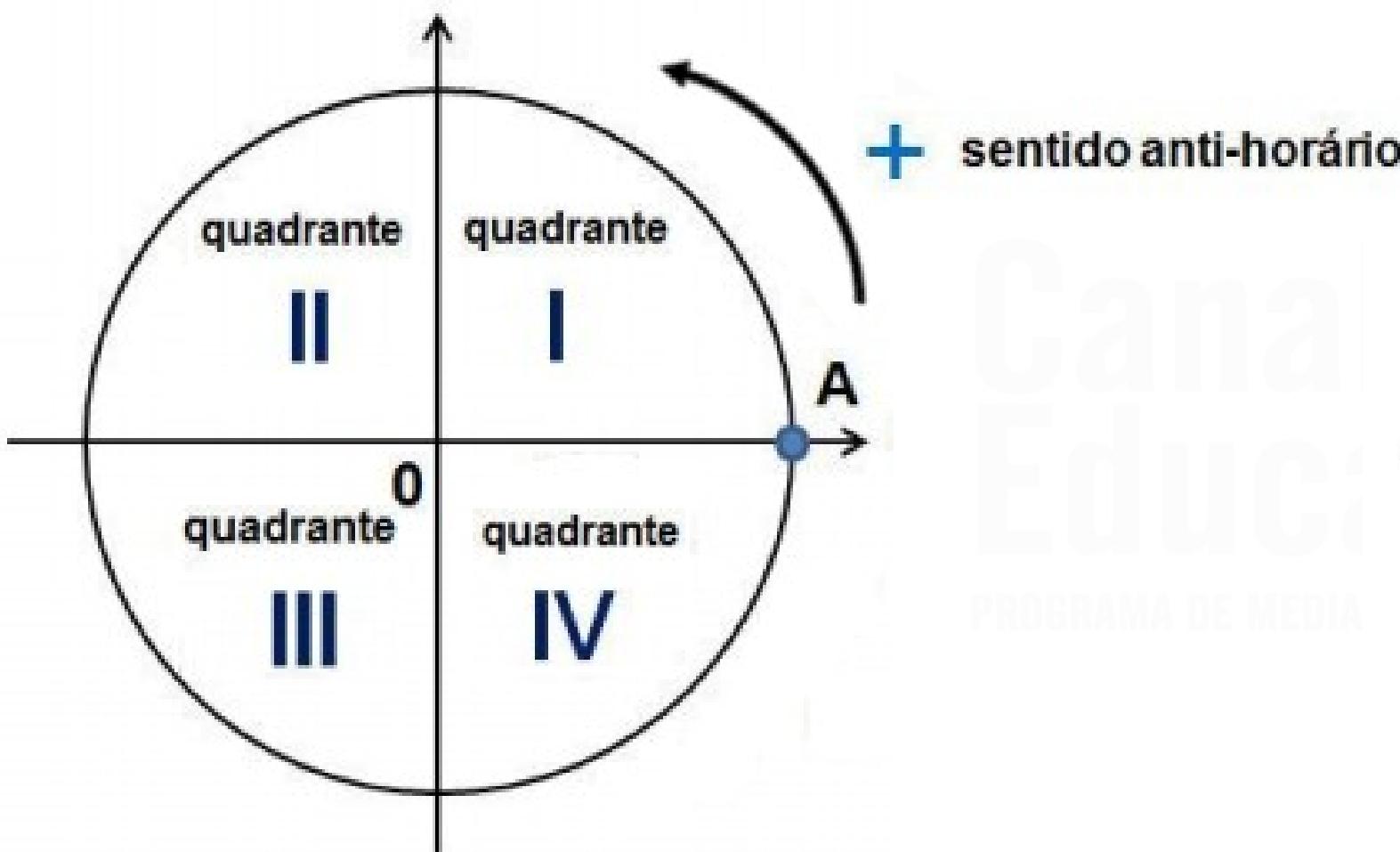
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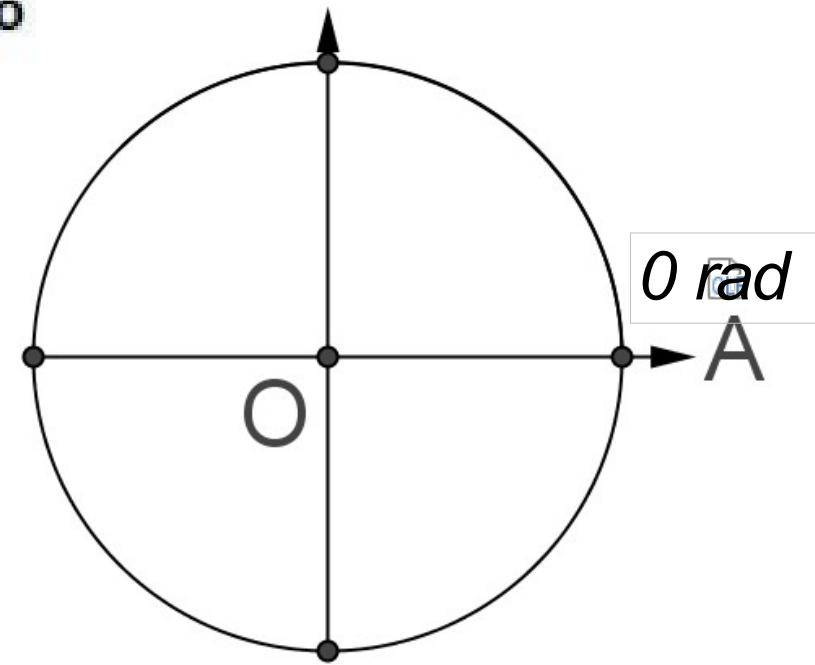
+ sentido anti-horário



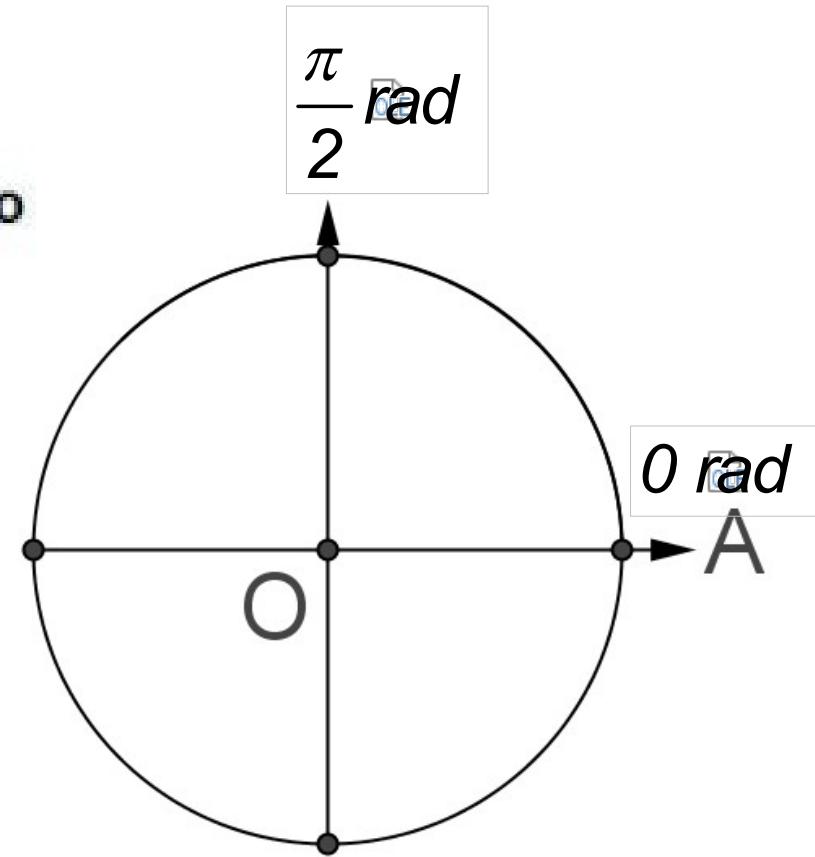
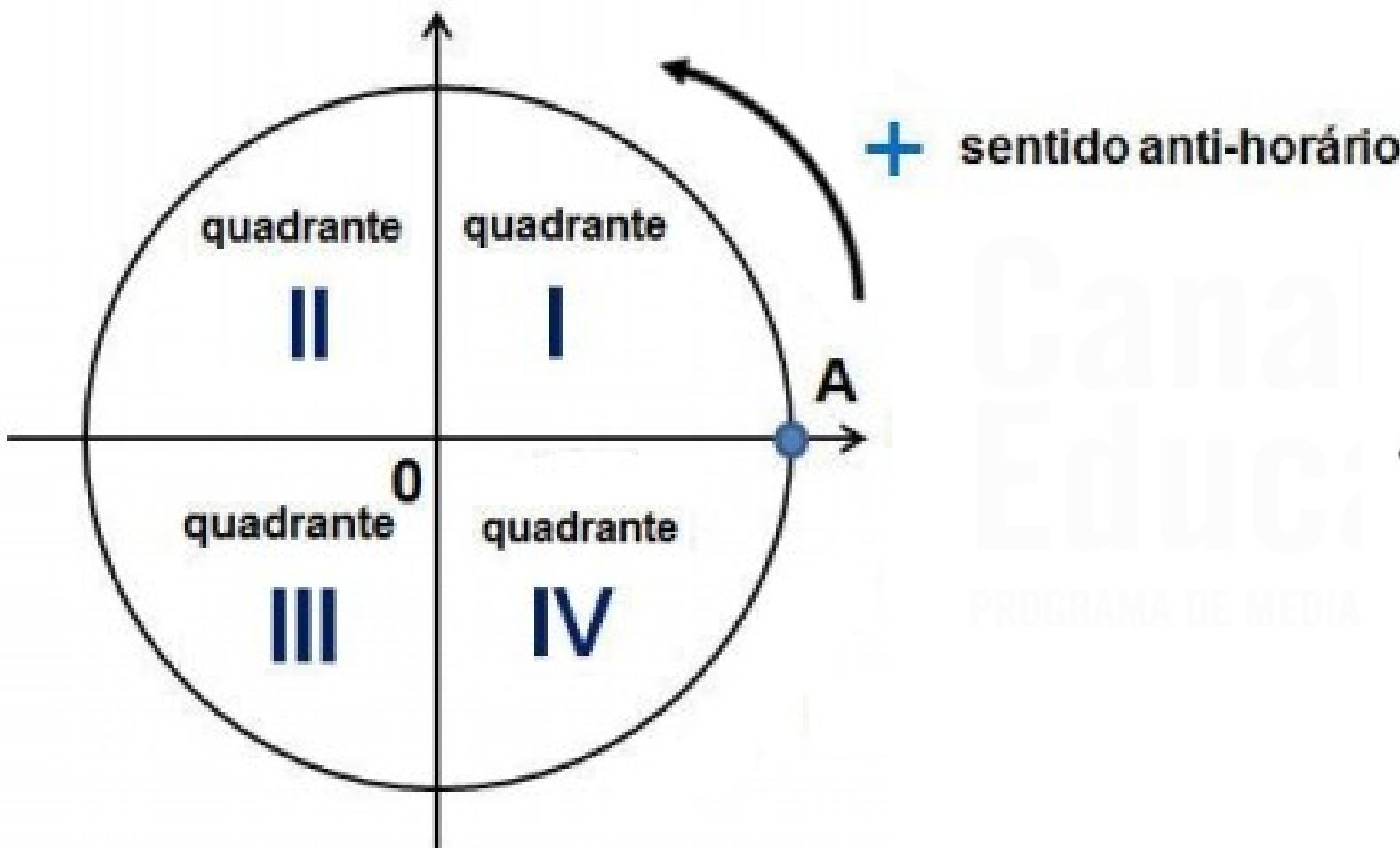
# Arcos Côngruos



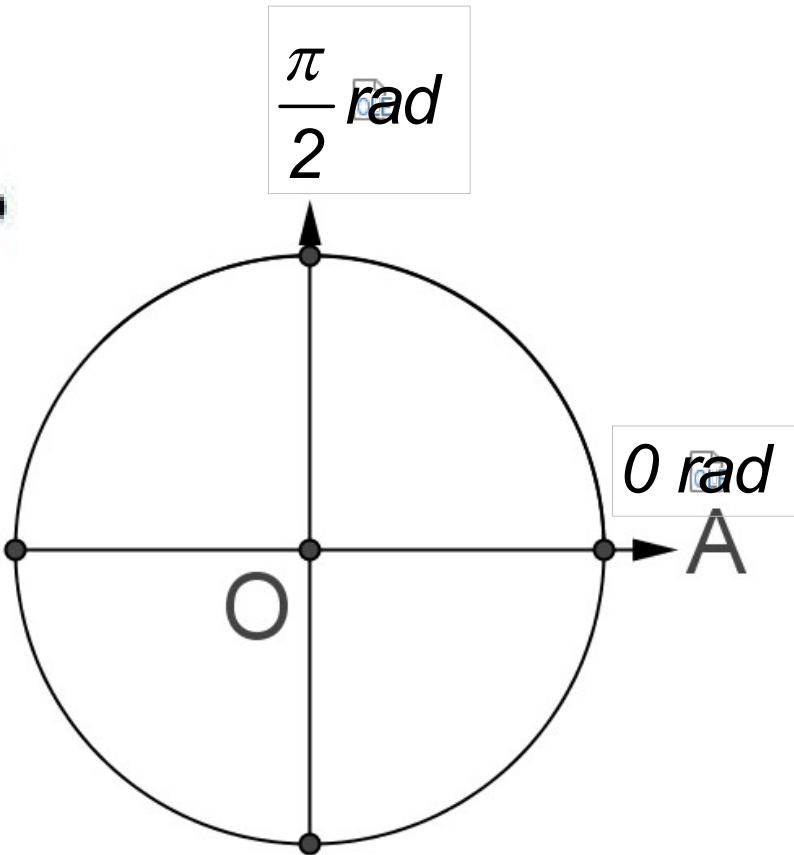
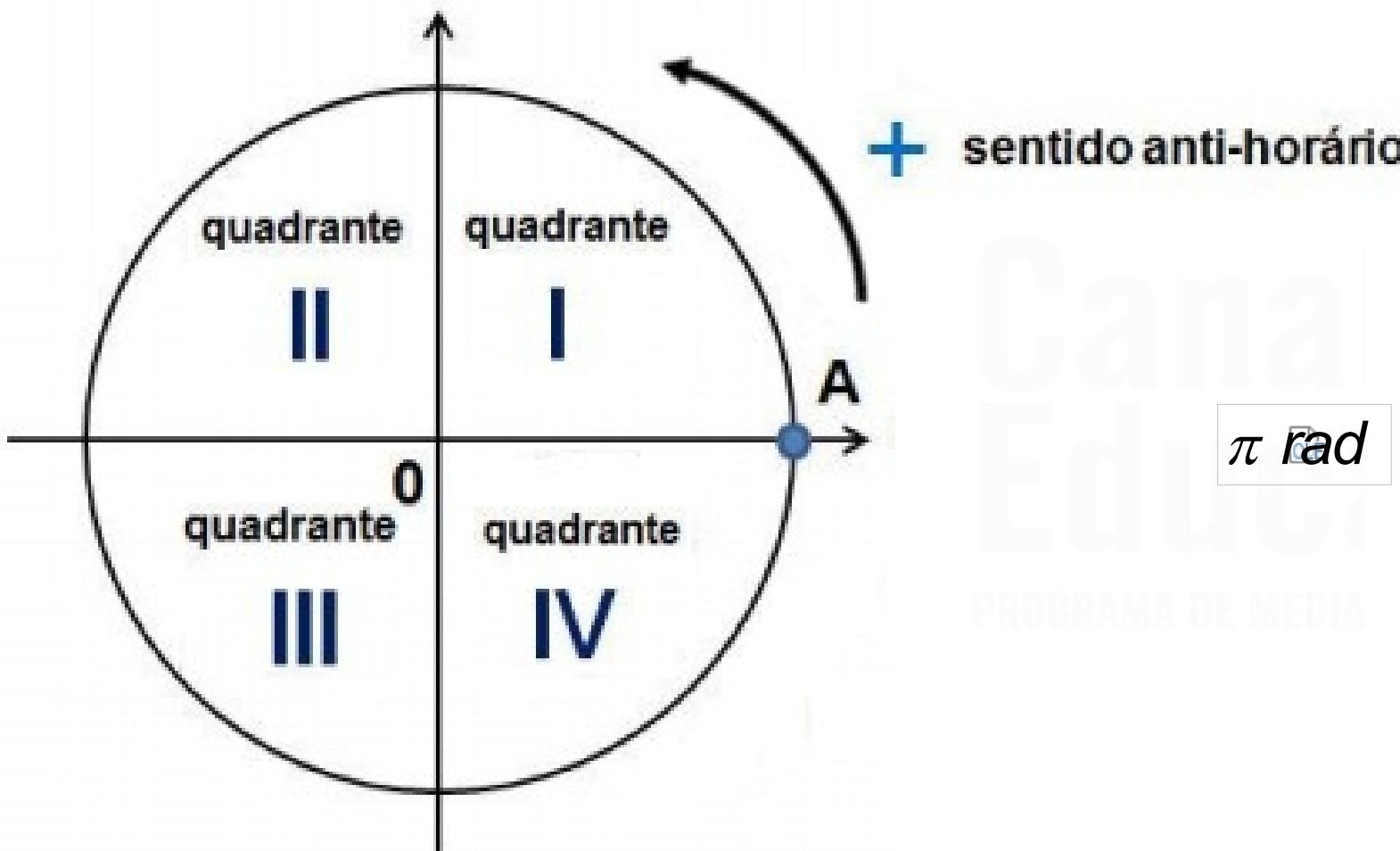
+ sentido anti-horário



# Arcos Côngruos

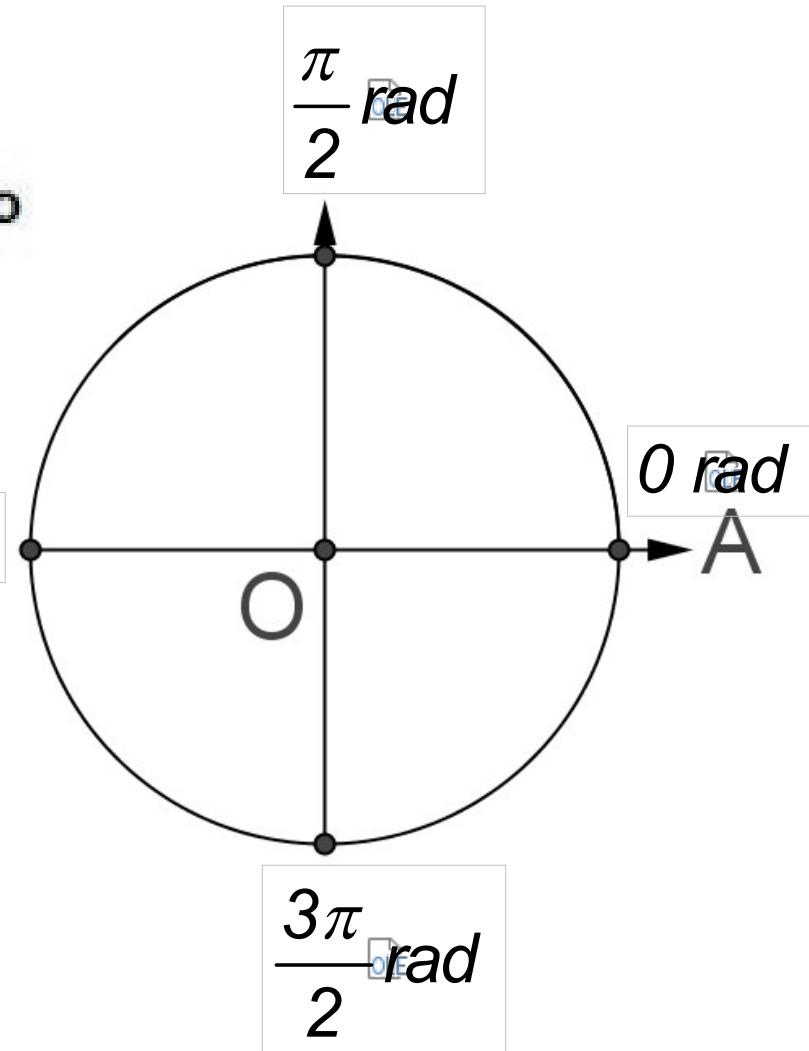
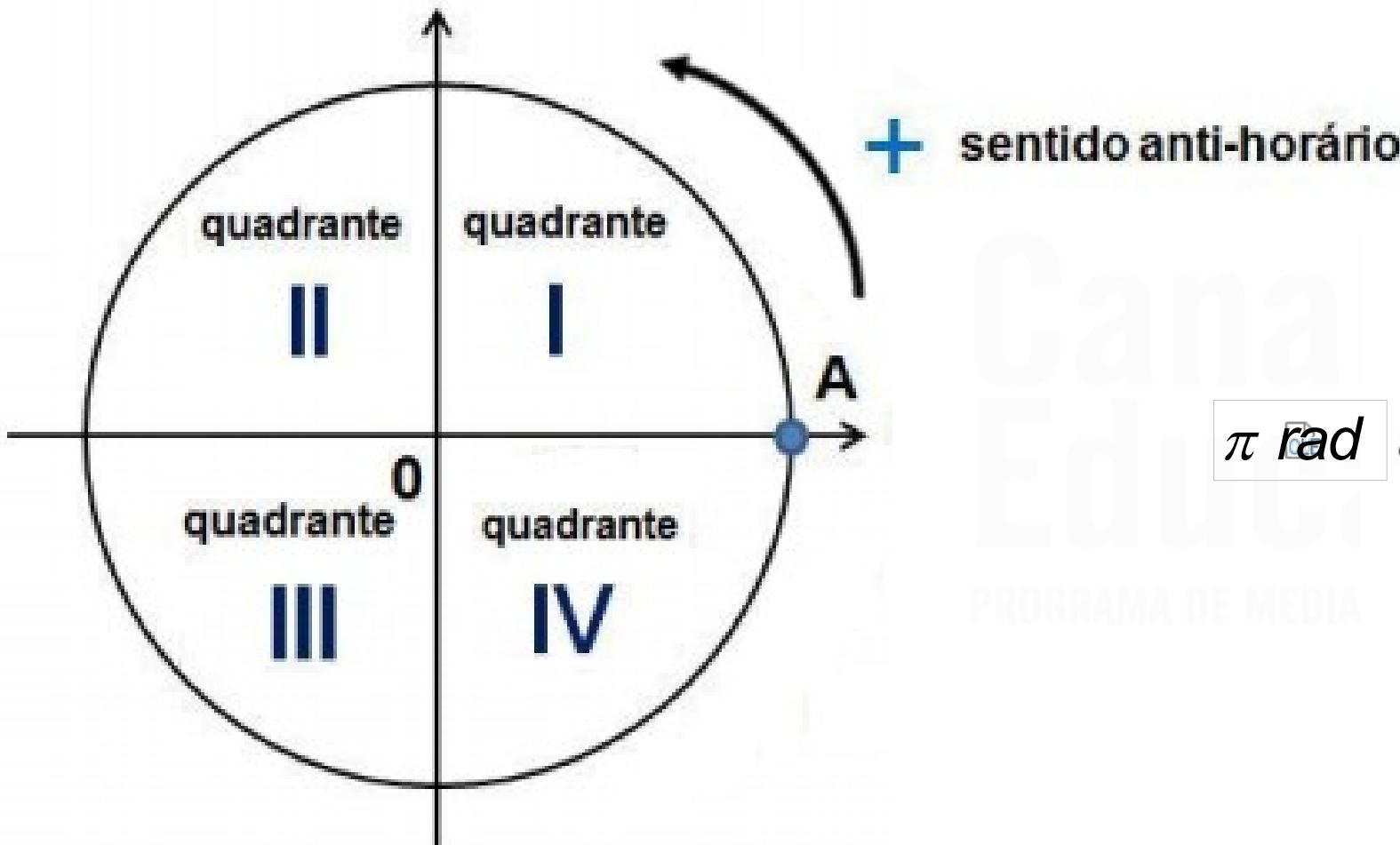


# Arcos Côngruos

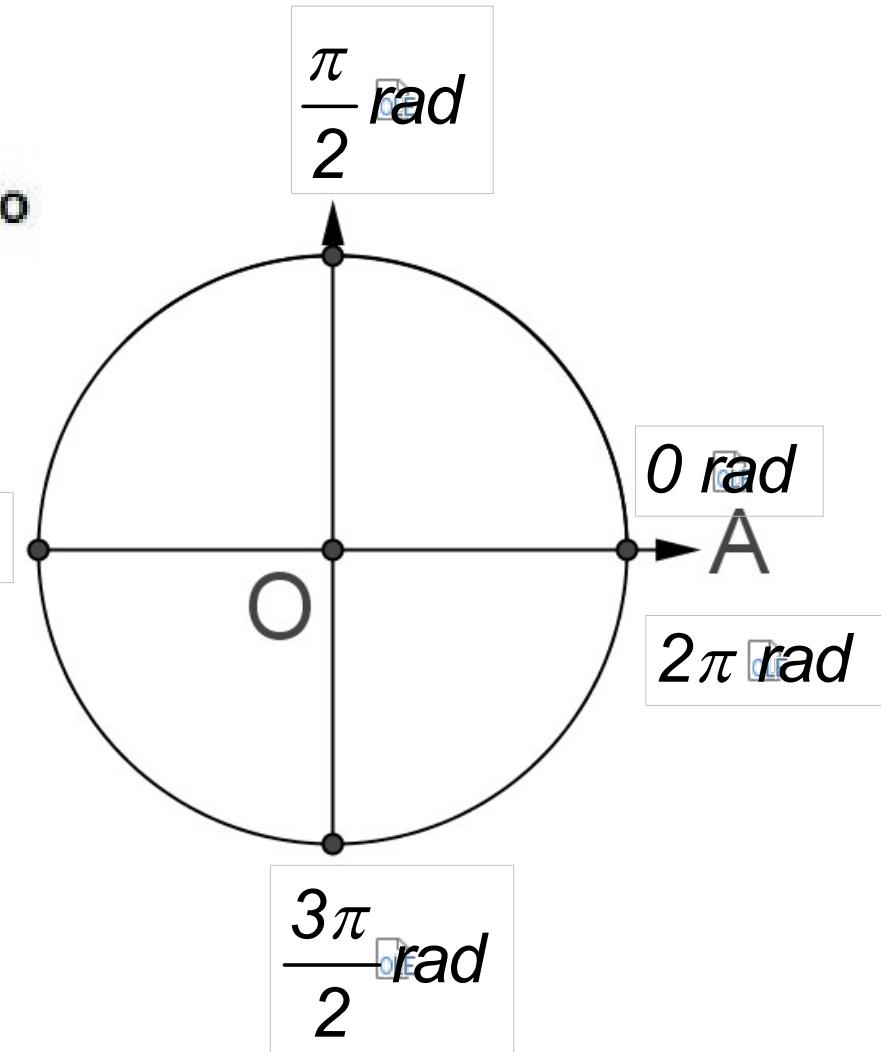
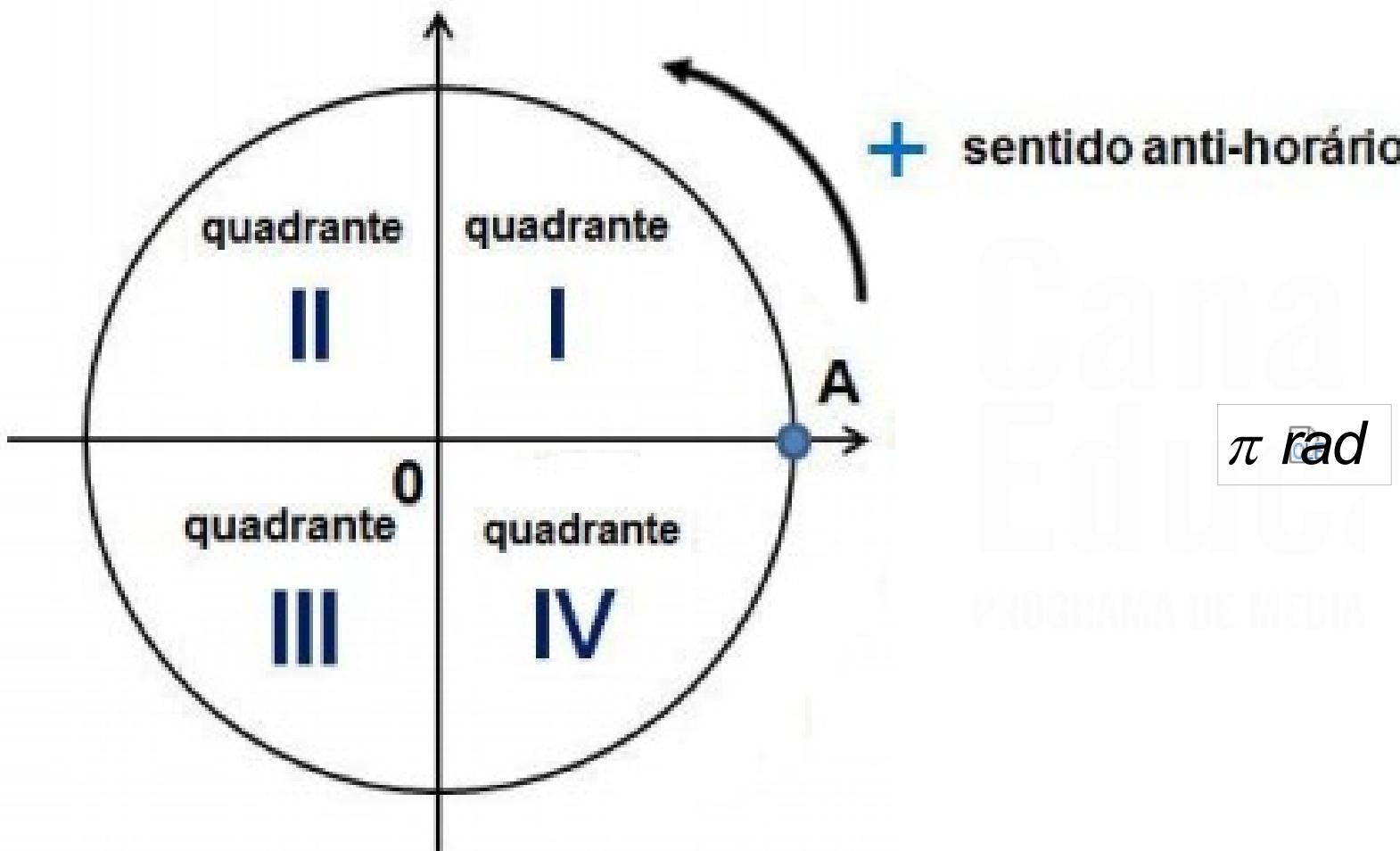


PROGRAMA DE MÉDIA

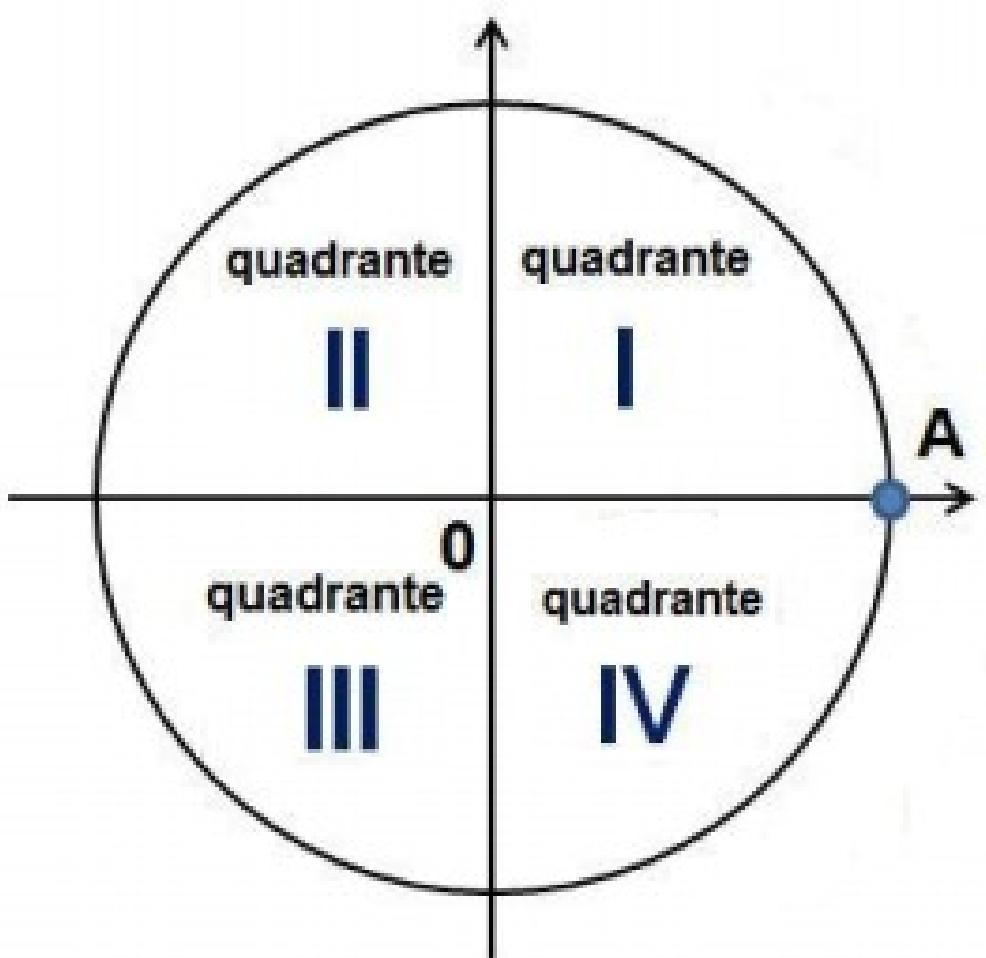
# Arcos Côngruos



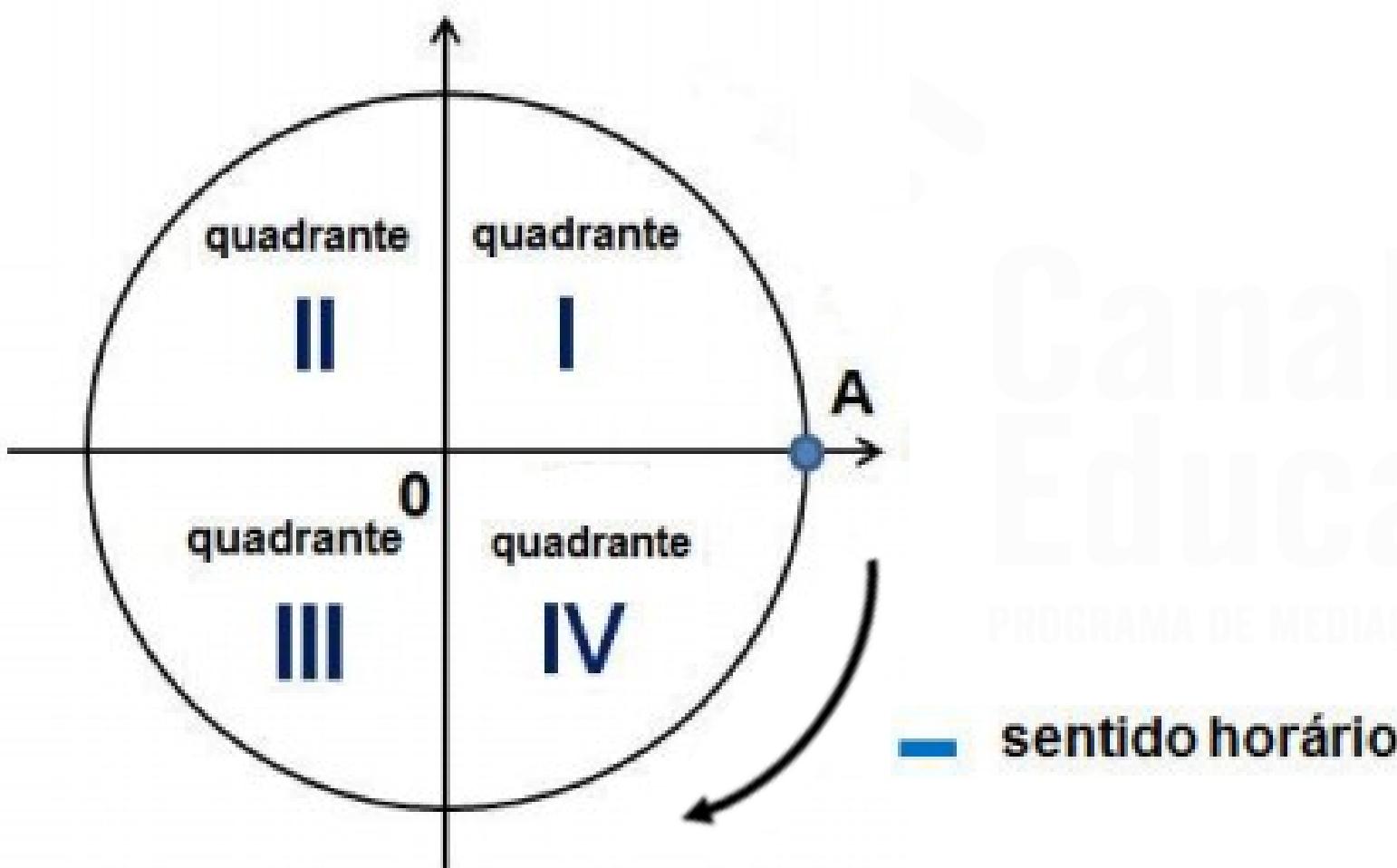
# Arcos Côngruos



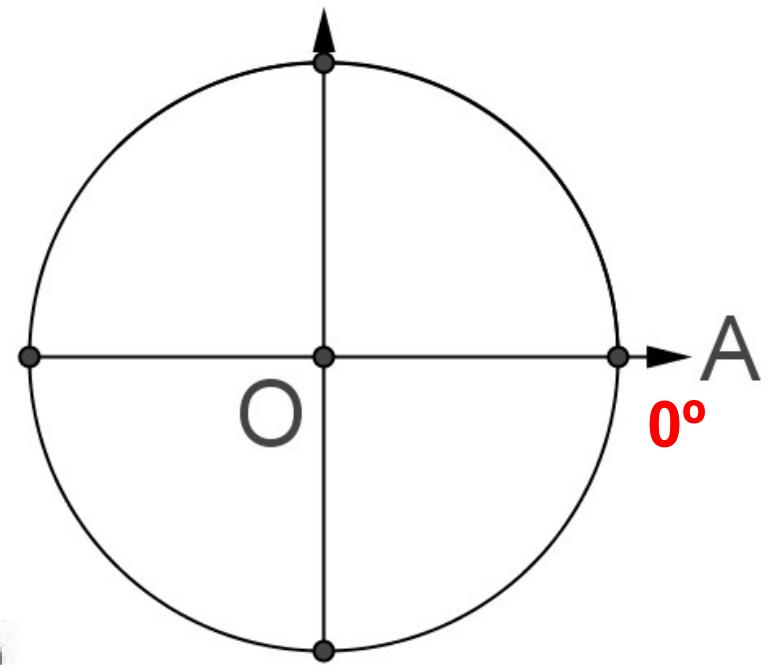
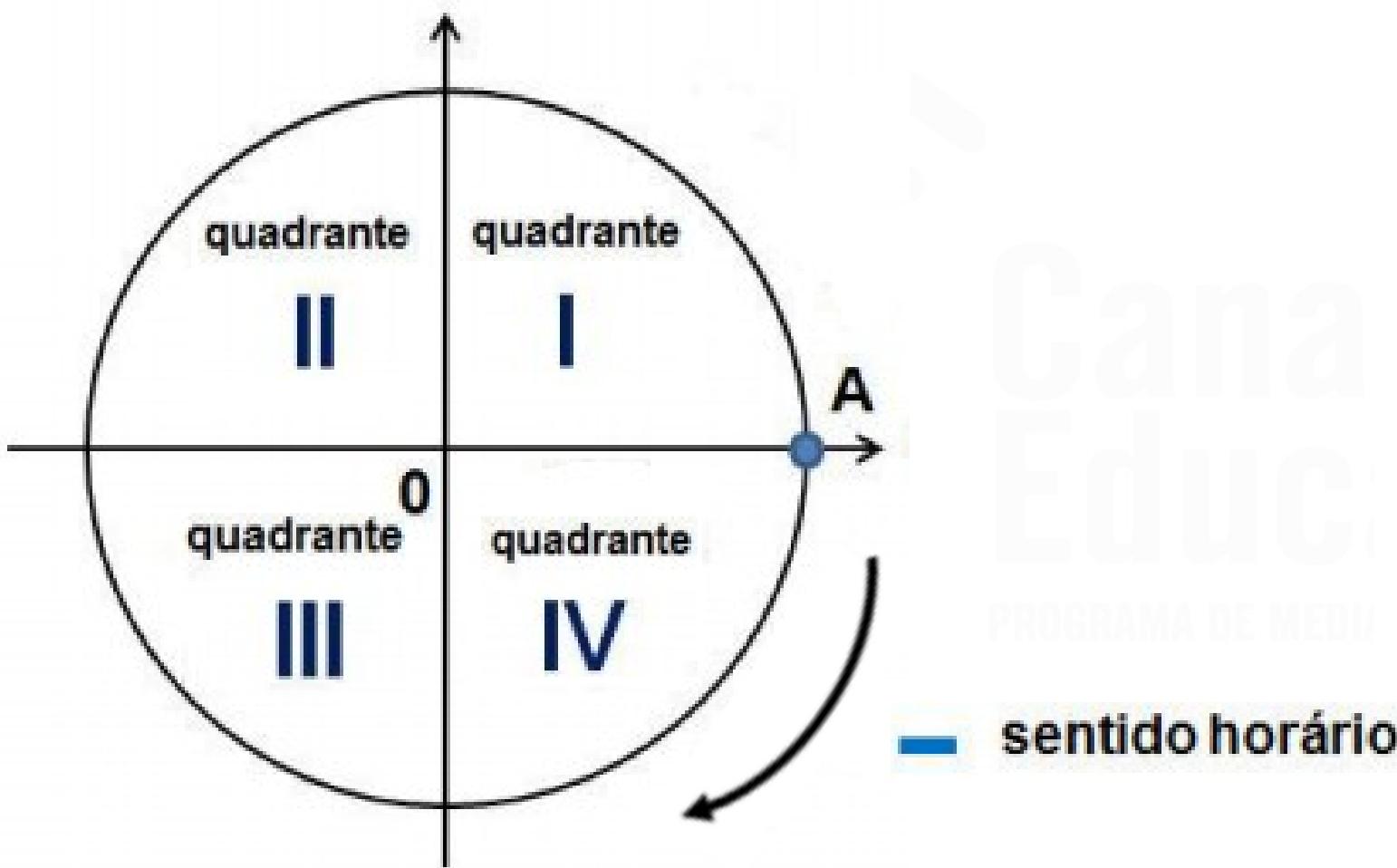
# Arcos Congruos



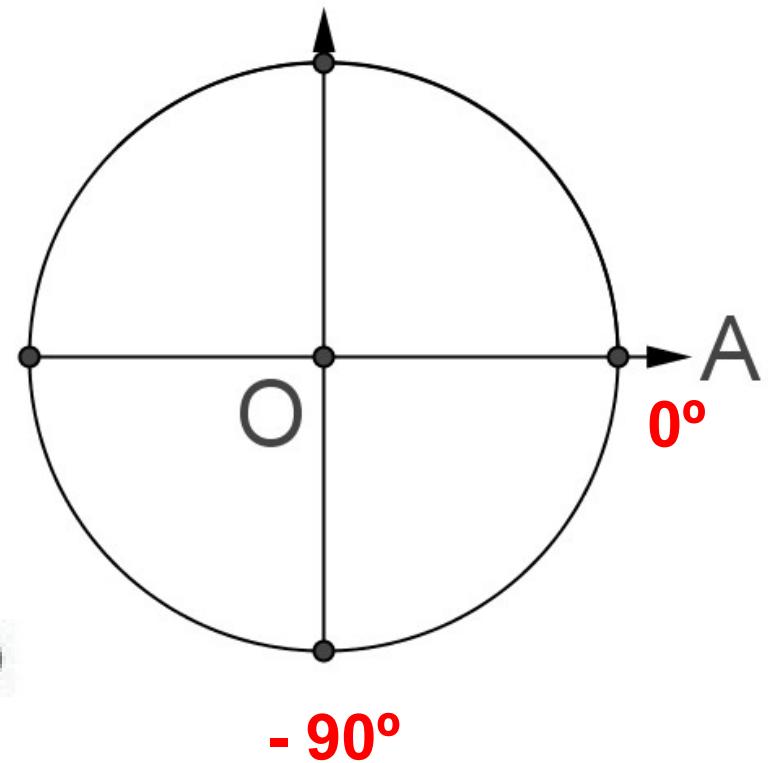
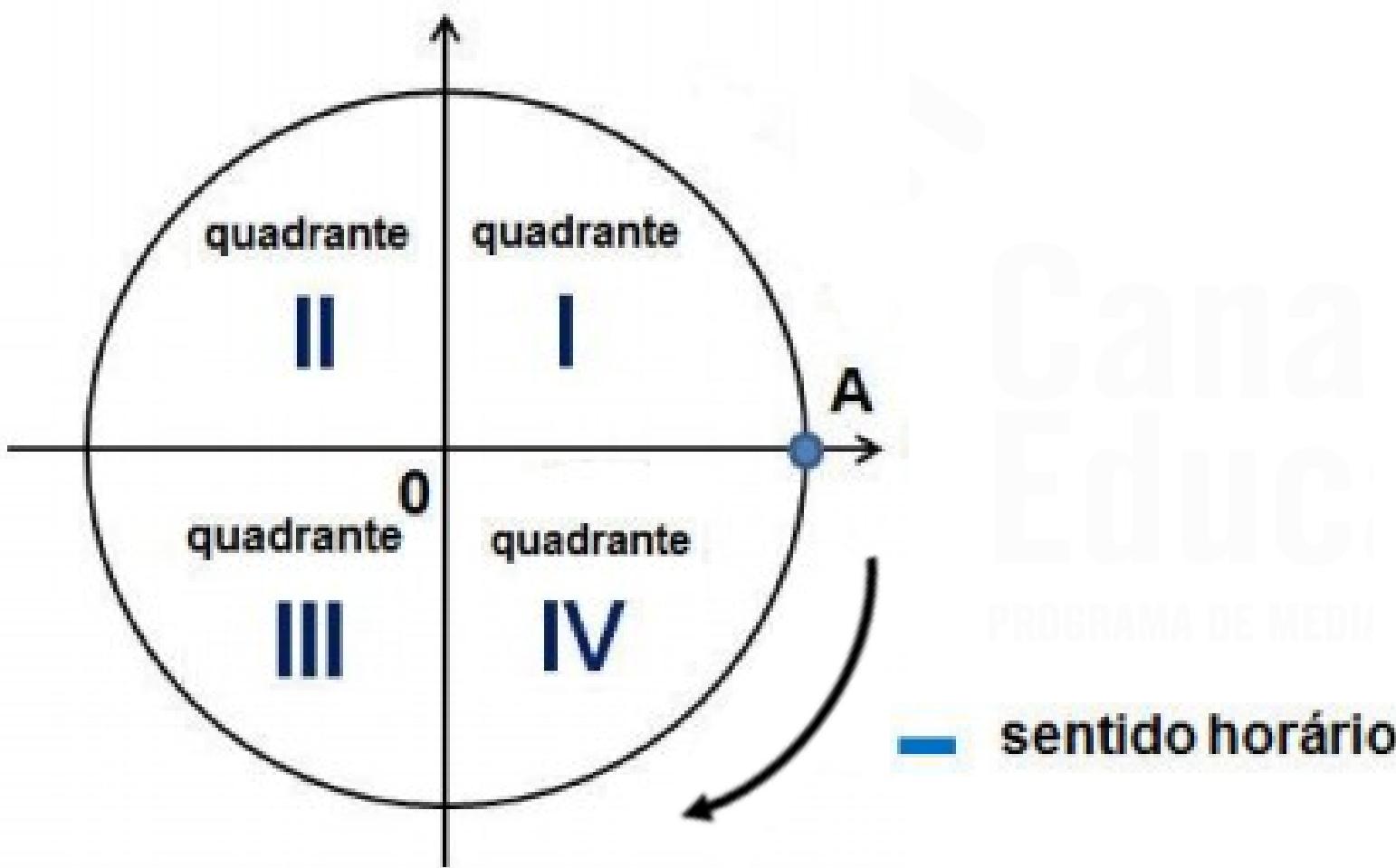
# Arcos Côngruos



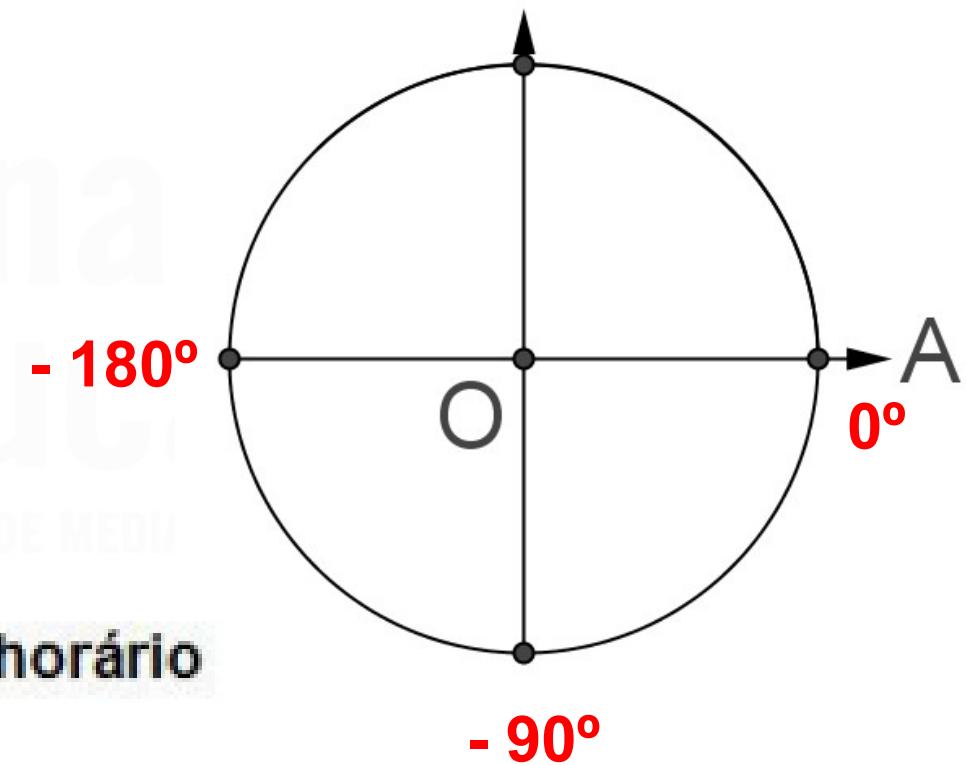
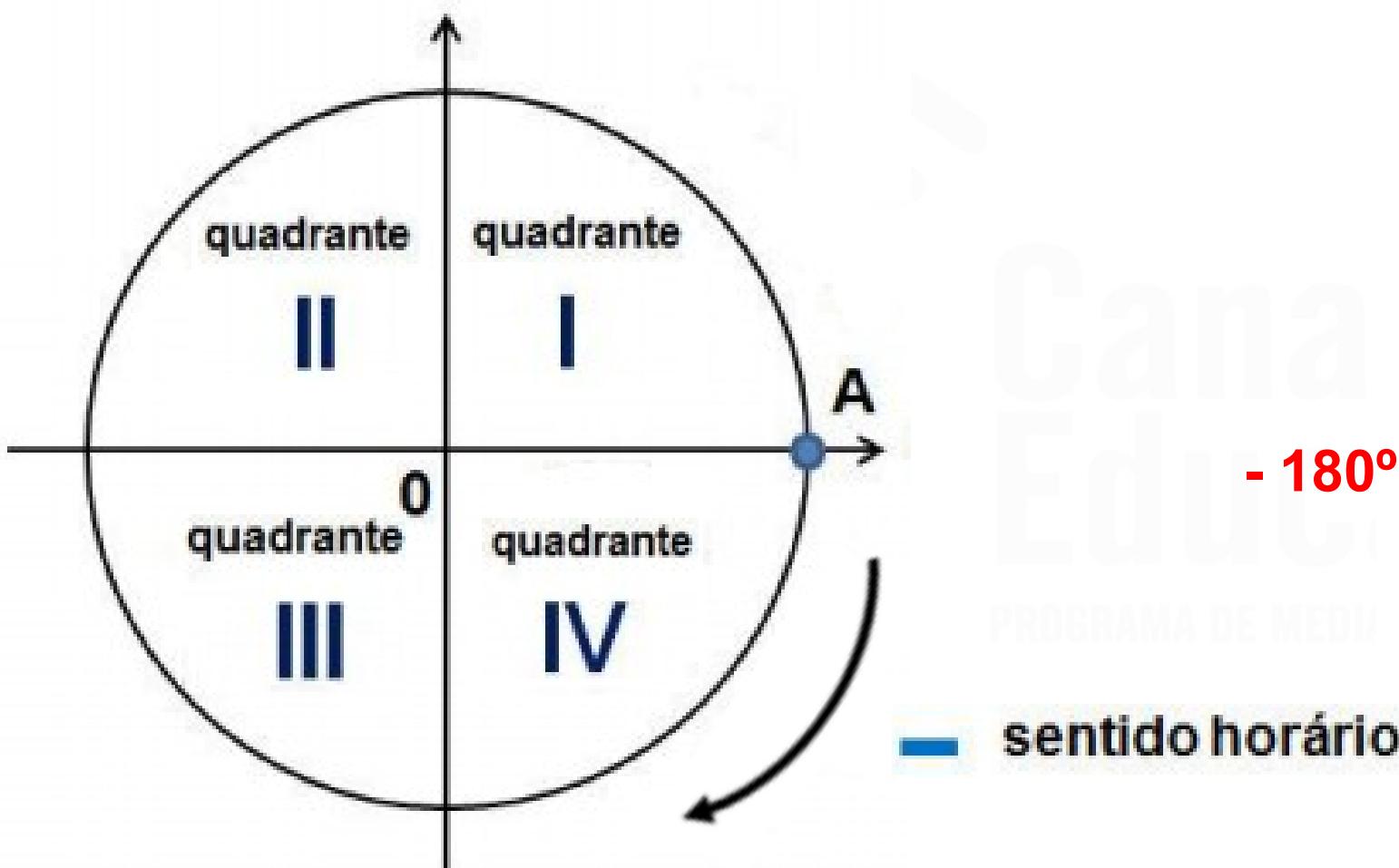
# Arcos Côngruos



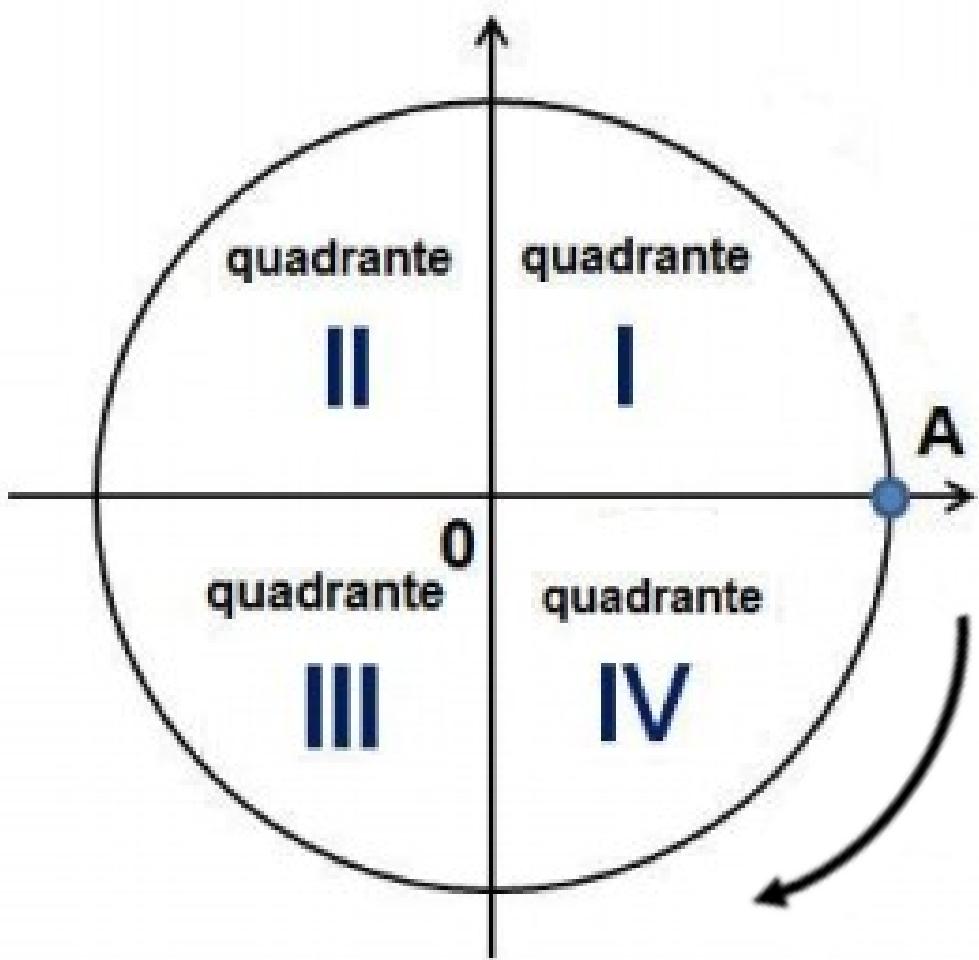
# Arcos Côngruos



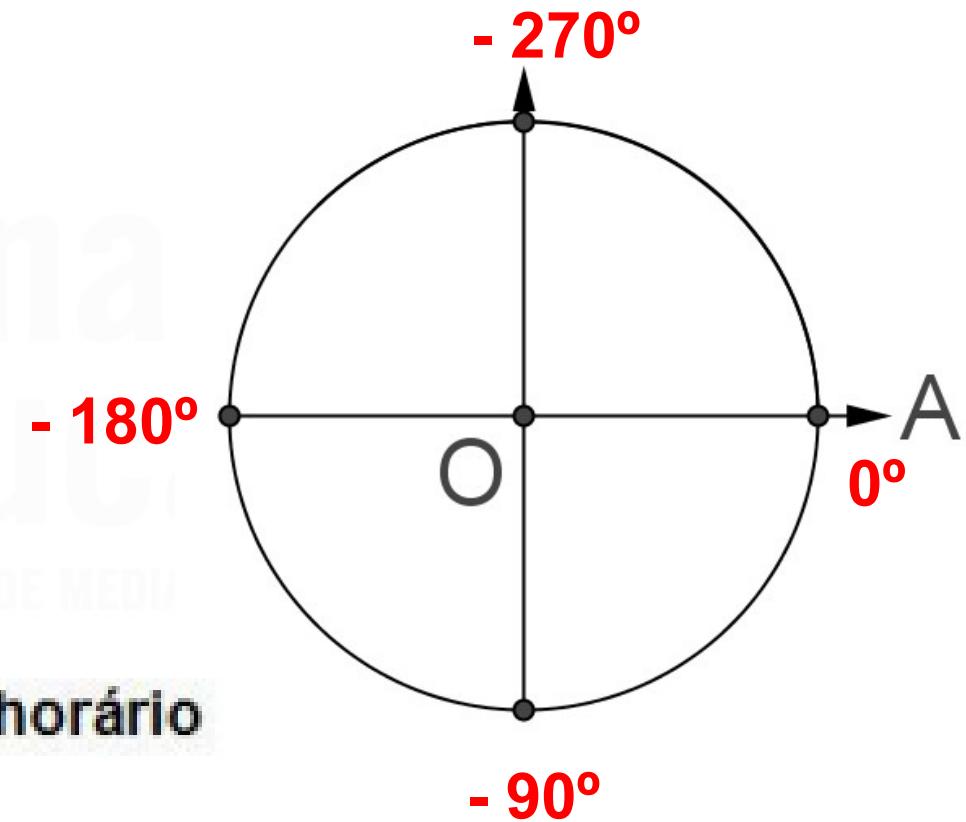
# Arcos Côngruos



# Arcos Côngruos

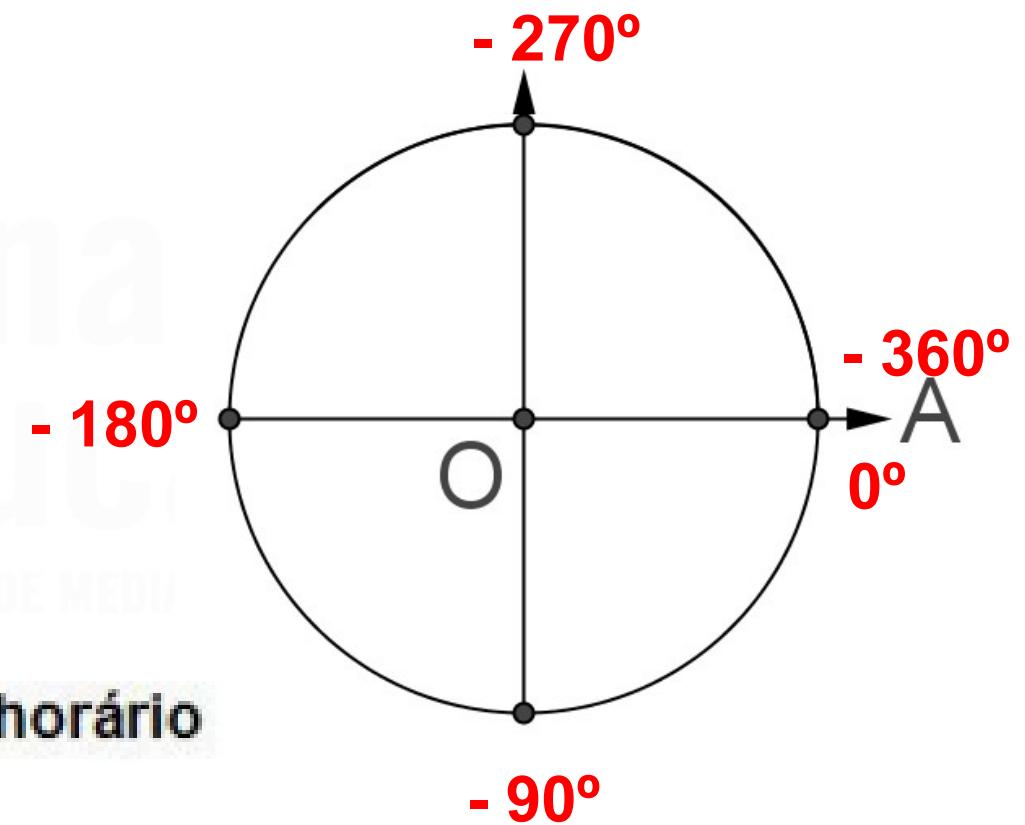
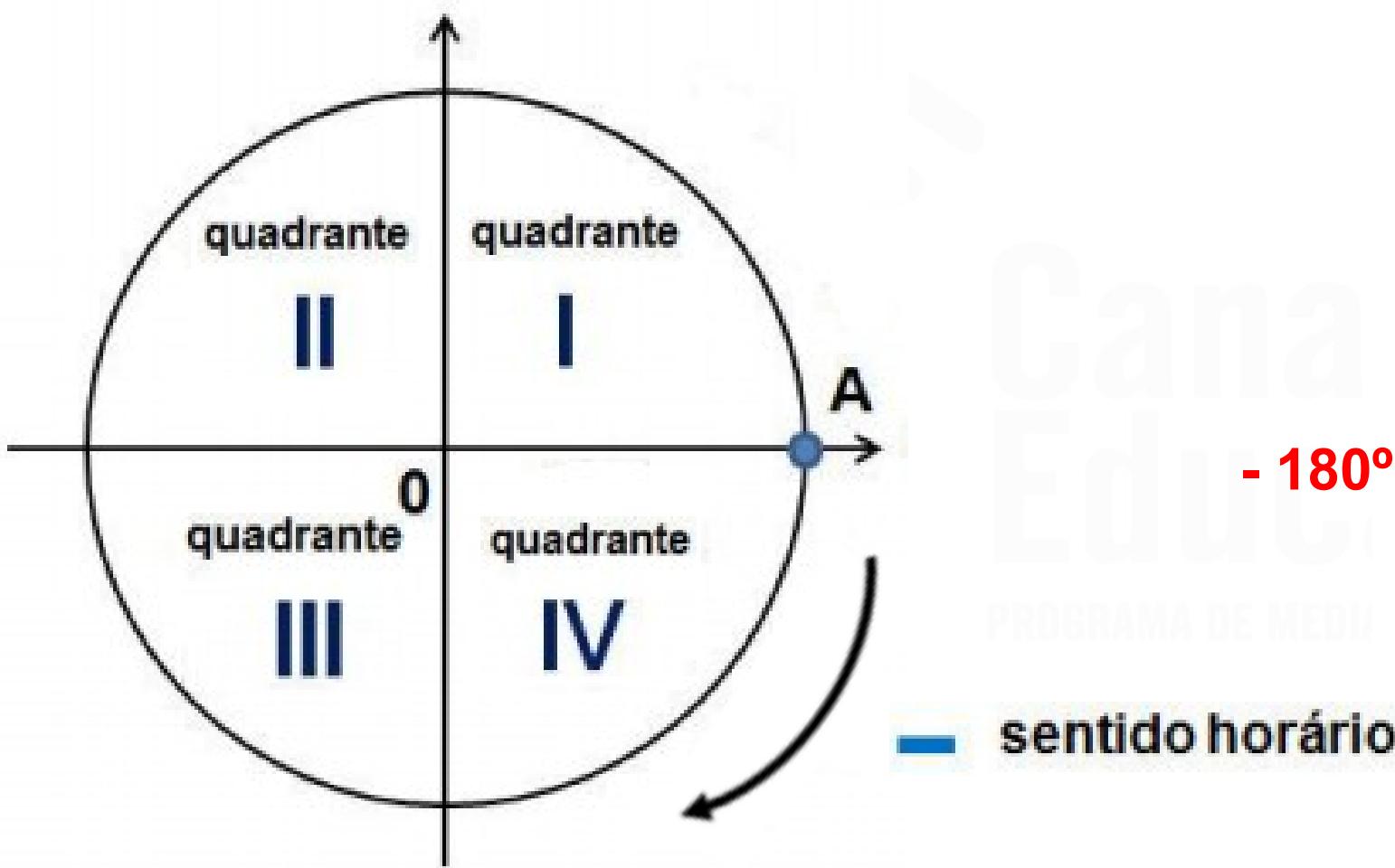


sentido horário



sentido horário

# Arcos Côngruos



# Determine o quadrante

A)  $15^\circ \Rightarrow$

B)  $320^\circ \Rightarrow$

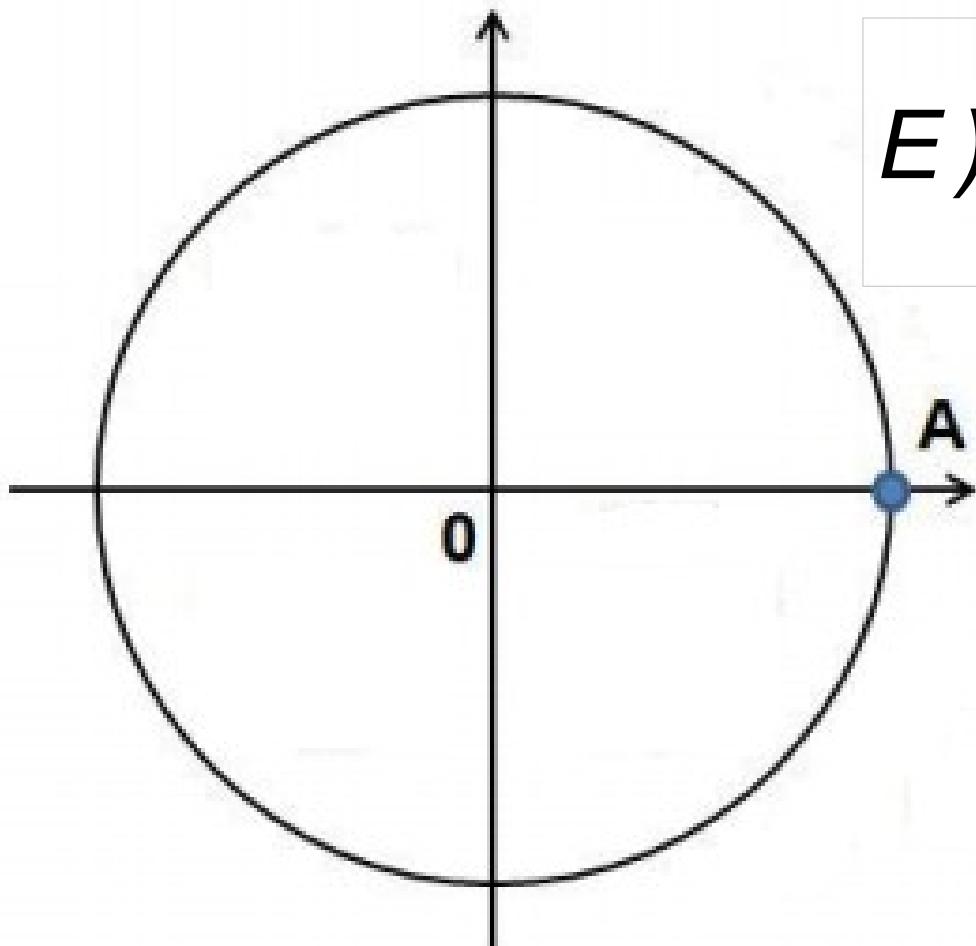
C)  $-60^\circ \Rightarrow$

D)  $-120^\circ \Rightarrow$

E)  $\frac{2\pi}{3} \text{ rad} \Rightarrow$

F)  $\frac{\pi}{4} \text{ rad} \Rightarrow$

G)  $\frac{3\pi}{2} \text{ rad} \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow$

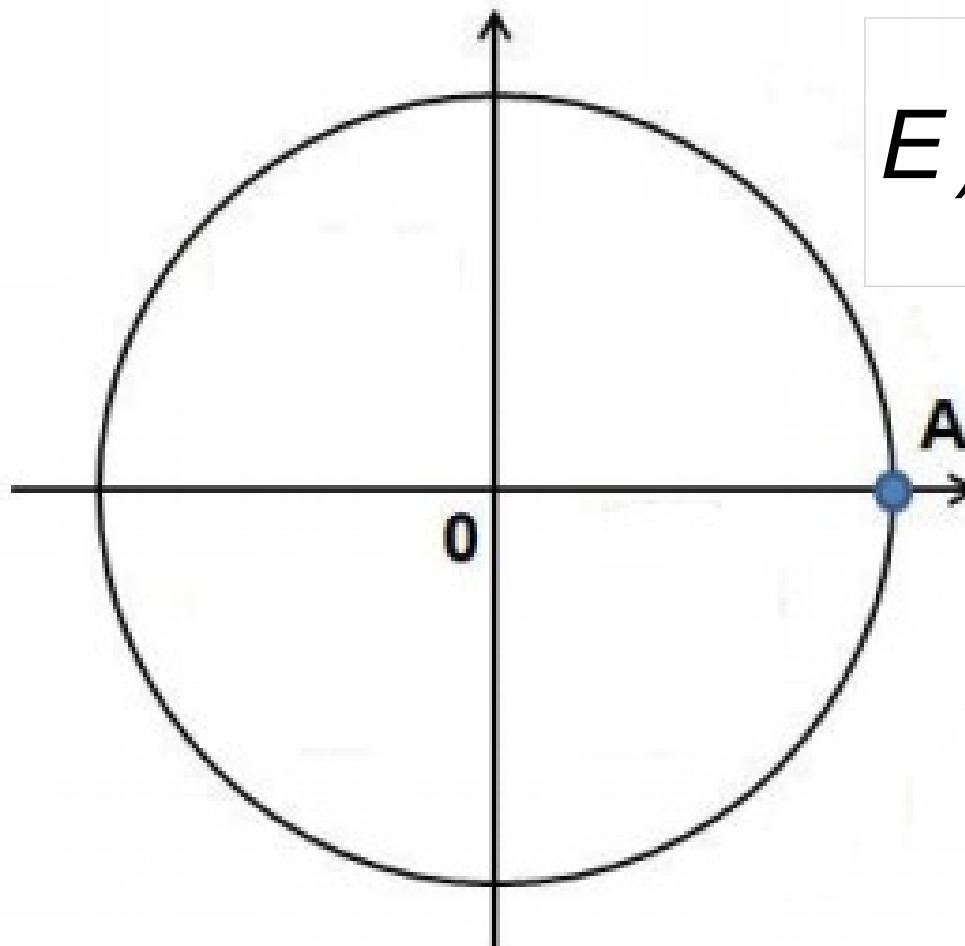
C)  $-60^\circ \Rightarrow$

D)  $-120^\circ \Rightarrow$

E)  $\frac{2\pi}{3} rad \Rightarrow$

F)  $\frac{\pi}{4} rad \Rightarrow$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

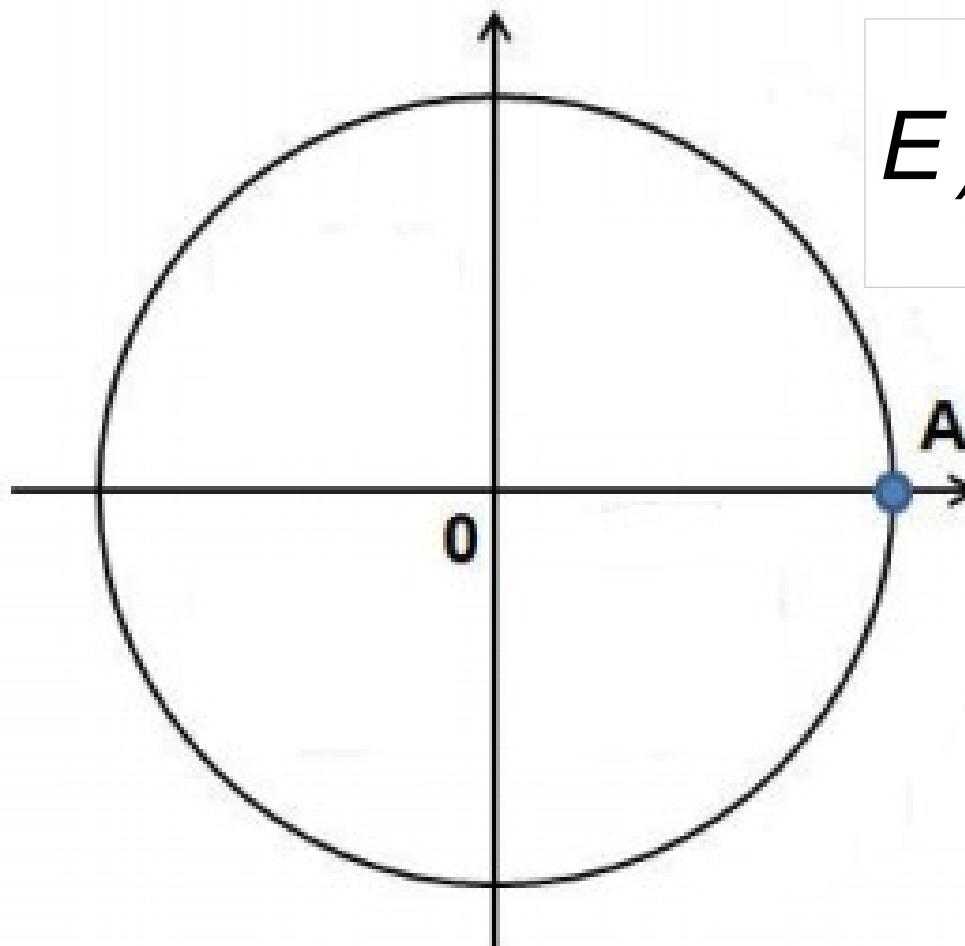
C)  $-60^\circ \Rightarrow$

D)  $-120^\circ \Rightarrow$

E)  $\frac{2\pi}{3} rad \Rightarrow$

F)  $\frac{\pi}{4} rad \Rightarrow$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

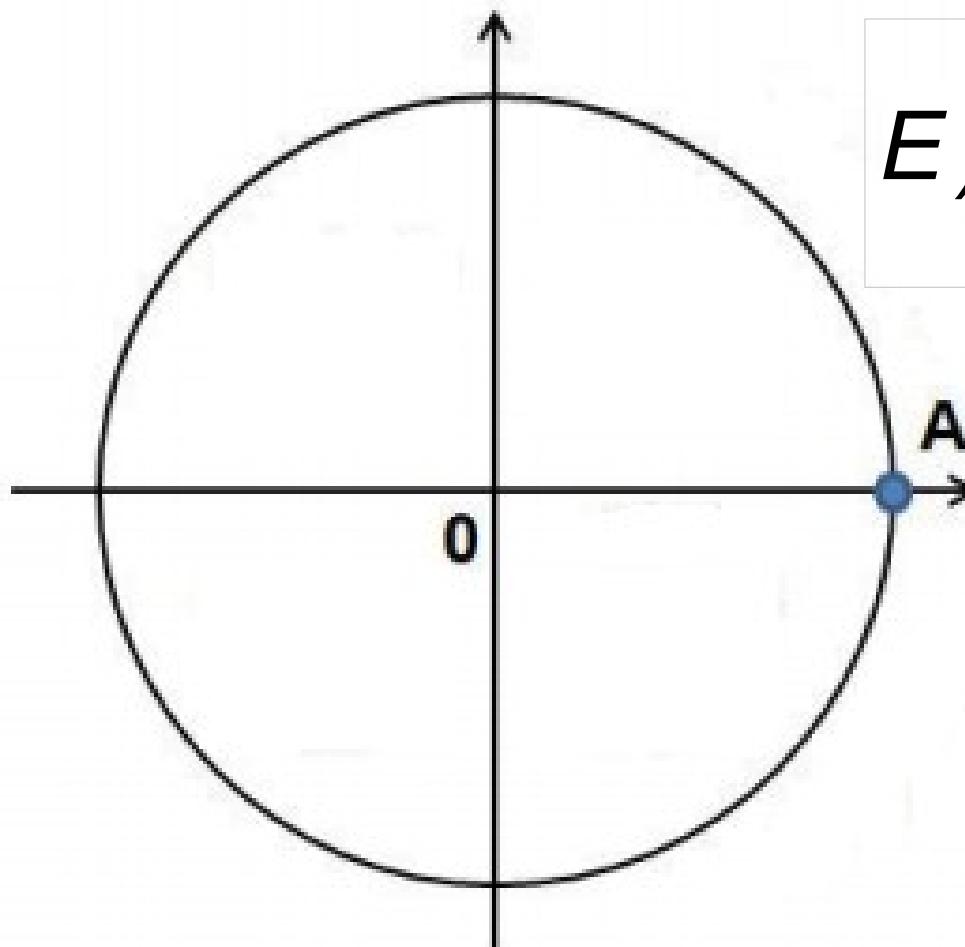
C)  $-60^\circ \Rightarrow 4^\circ Q$

D)  $-120^\circ \Rightarrow$

E)  $\frac{2\pi}{3} rad \Rightarrow$

F)  $\frac{\pi}{4} rad \Rightarrow$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

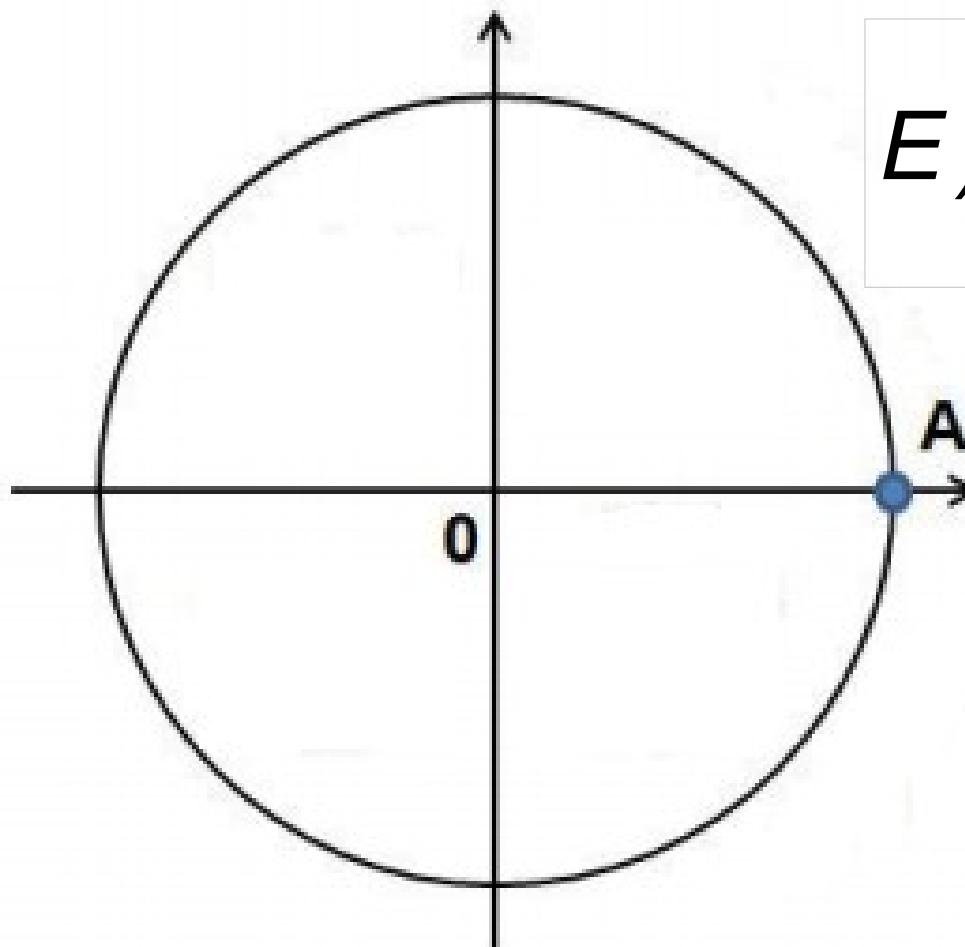
C)  $-60^\circ \Rightarrow 4^\circ Q$

D)  $-120^\circ \Rightarrow 3^\circ Q$

E)  $\frac{2\pi}{3} rad \Rightarrow$

F)  $\frac{\pi}{4} rad \Rightarrow$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

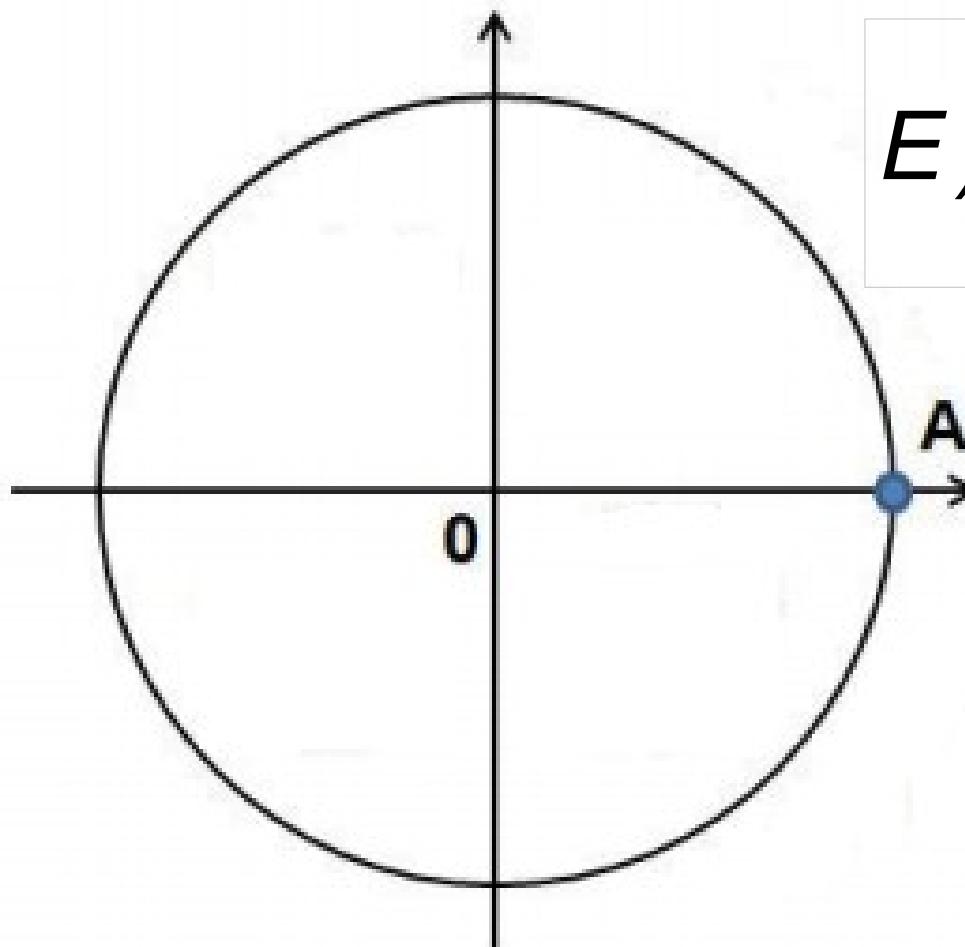
C)  $-60^\circ \Rightarrow 4^\circ Q$

D)  $-120^\circ \Rightarrow 3^\circ Q$

E)  $\frac{2\pi}{3} rad \Rightarrow 2^\circ Q$

F)  $\frac{\pi}{4} rad \Rightarrow$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

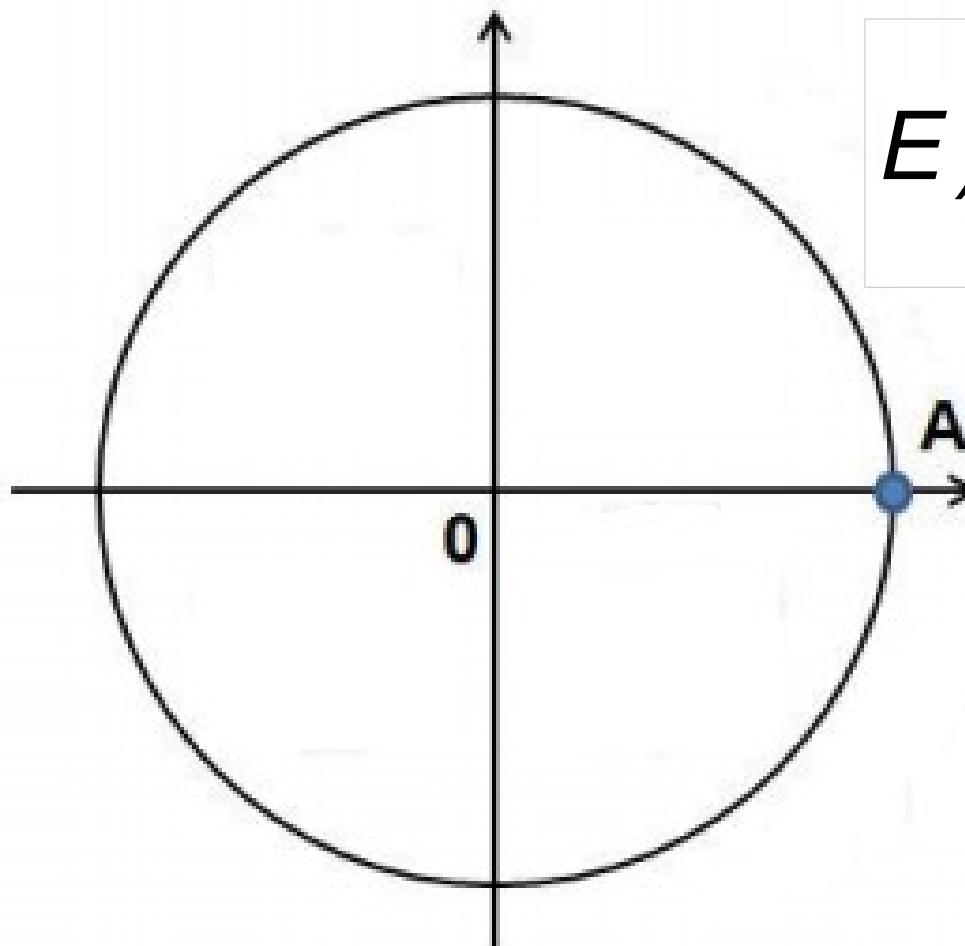
C)  $-60^\circ \Rightarrow 4^\circ Q$

D)  $-120^\circ \Rightarrow 3^\circ Q$

E)  $\frac{2\pi}{3} rad \Rightarrow 2^\circ Q$

F)  $\frac{\pi}{4} rad \Rightarrow 1^\circ Q$

G)  $\frac{3\pi}{2} rad \Rightarrow$



# Determine o quadrante

A)  $15^\circ \Rightarrow 1^\circ Q$

B)  $320^\circ \Rightarrow 4^\circ Q$

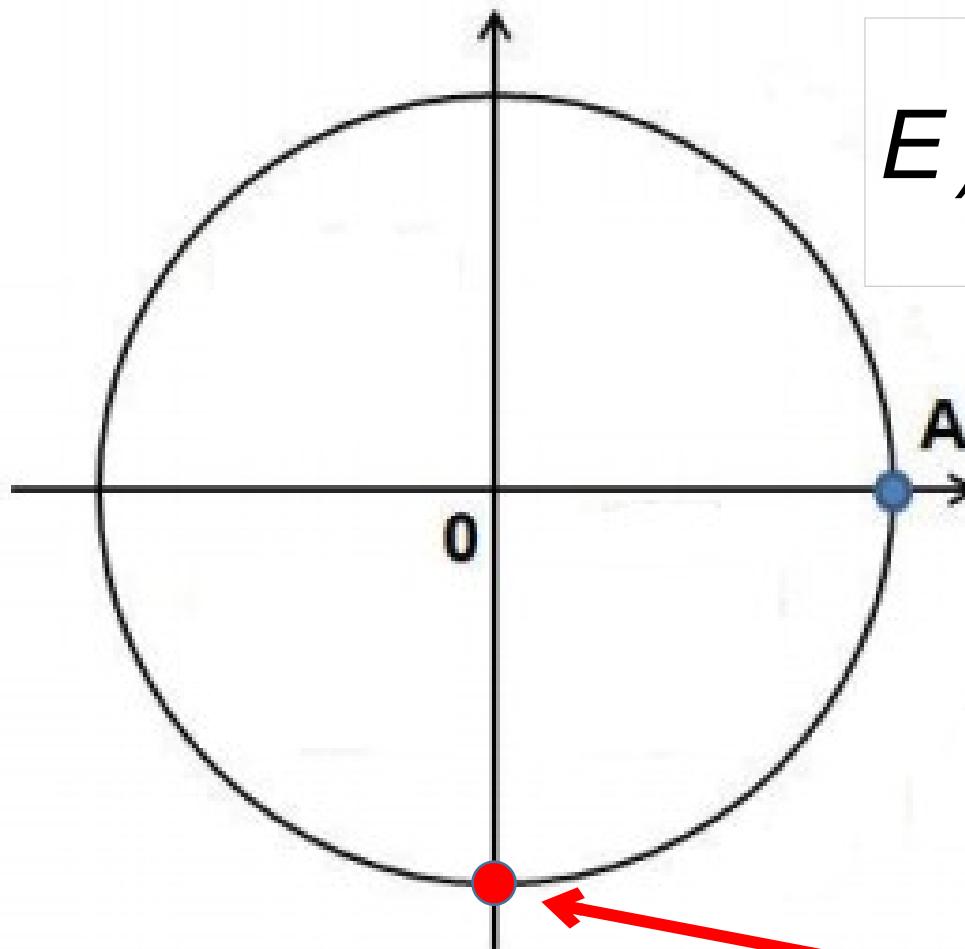
C)  $-60^\circ \Rightarrow 4^\circ Q$

D)  $-120^\circ \Rightarrow 3^\circ Q$

E)  $\frac{2\pi}{3} rad \Rightarrow 2^\circ Q$

F)  $\frac{\pi}{4} rad \Rightarrow 1^\circ Q$

G)  $\frac{3\pi}{2} rad \Rightarrow ?$

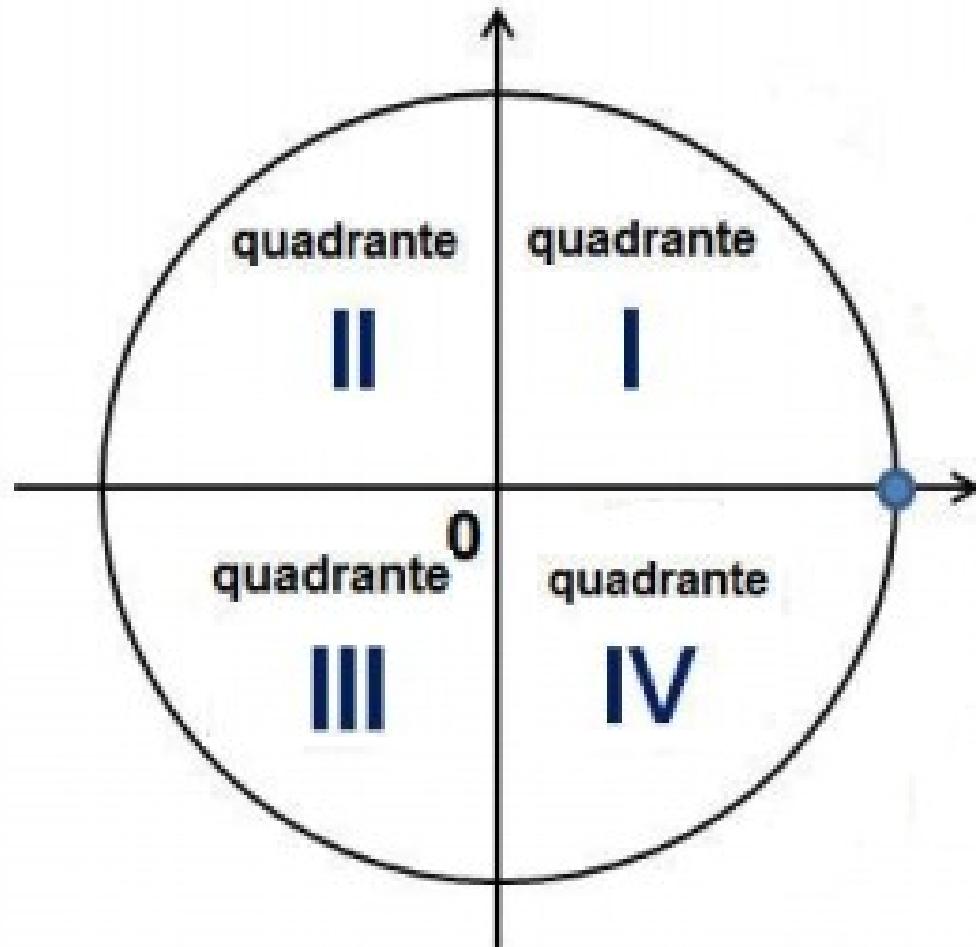


Extremidade

# Determine o quadrante

420°

780°

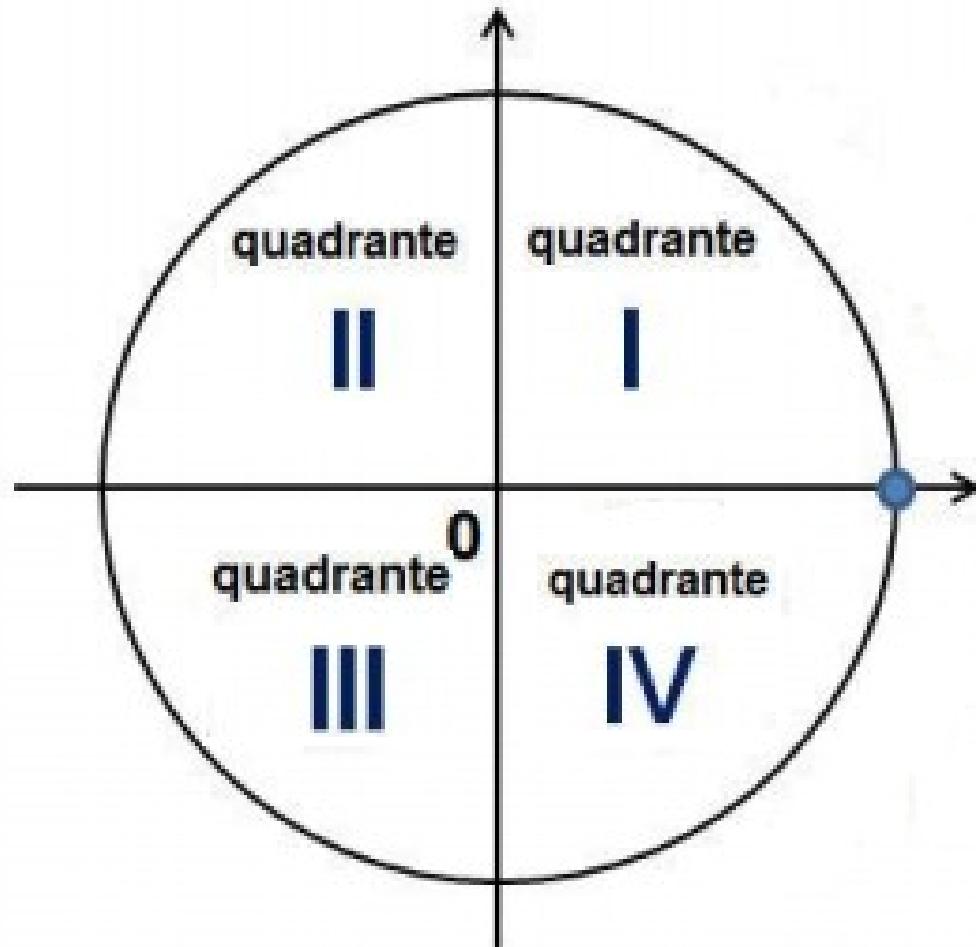


# Determine o quadrante

$420^\circ$

$420^\circ$   $\square$   $360^\circ$

$780^\circ$

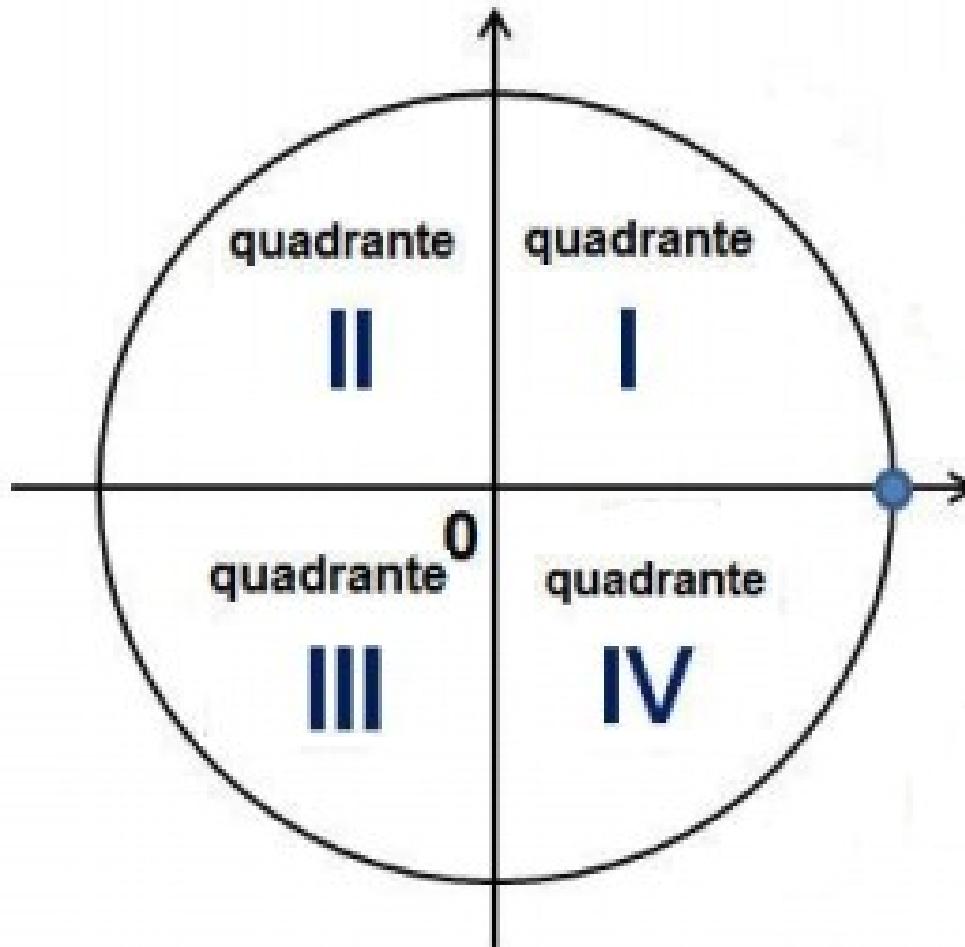


# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$

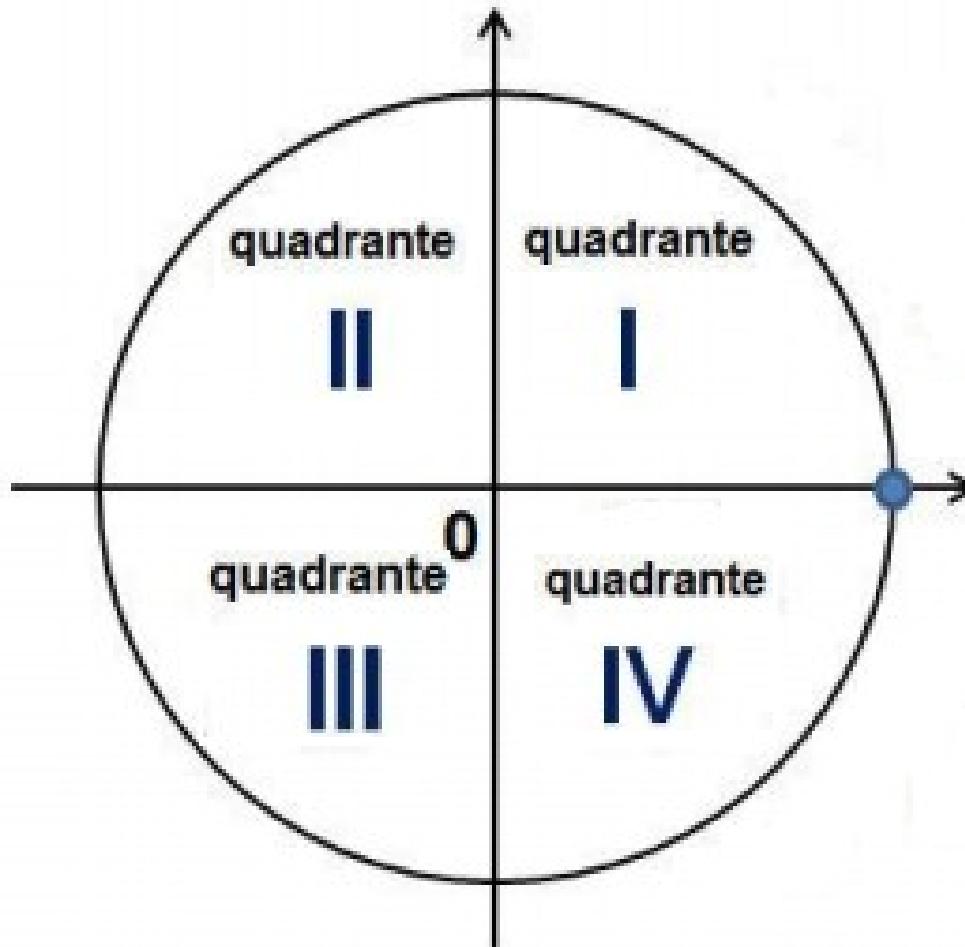
1



# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$   1



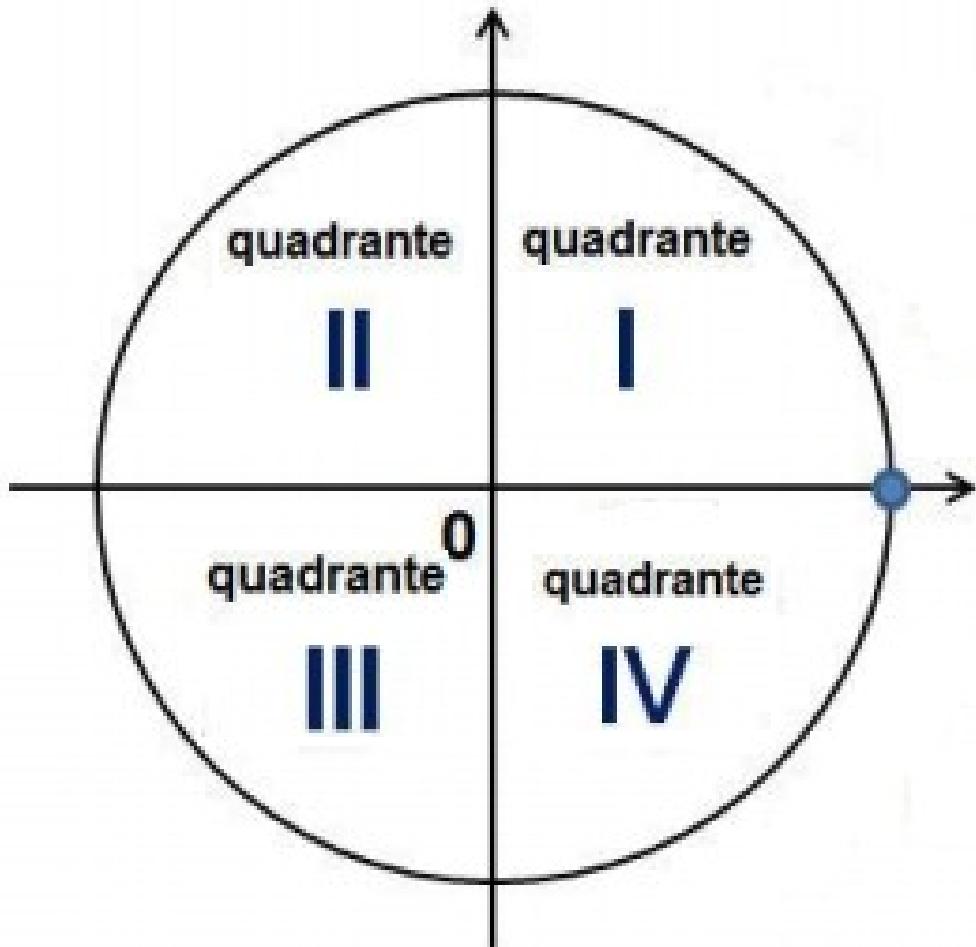
# Determine o quadrante

$420^\circ$

$420^\circ$    
 $(60^\circ)$  

$780^\circ$

$780^\circ$    
 $360^\circ$



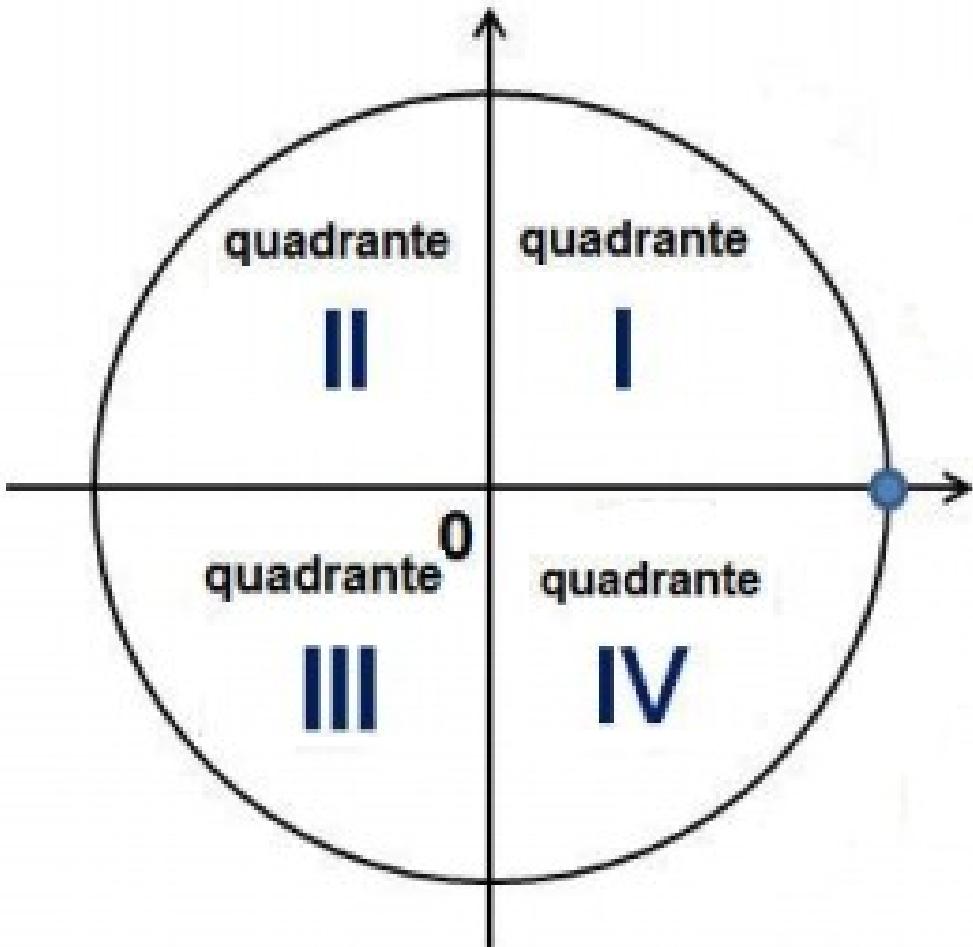
# Determine o quadrante

$420^\circ$

$420^\circ$    
 $(60^\circ)$   1

$780^\circ$

$780^\circ$    
2



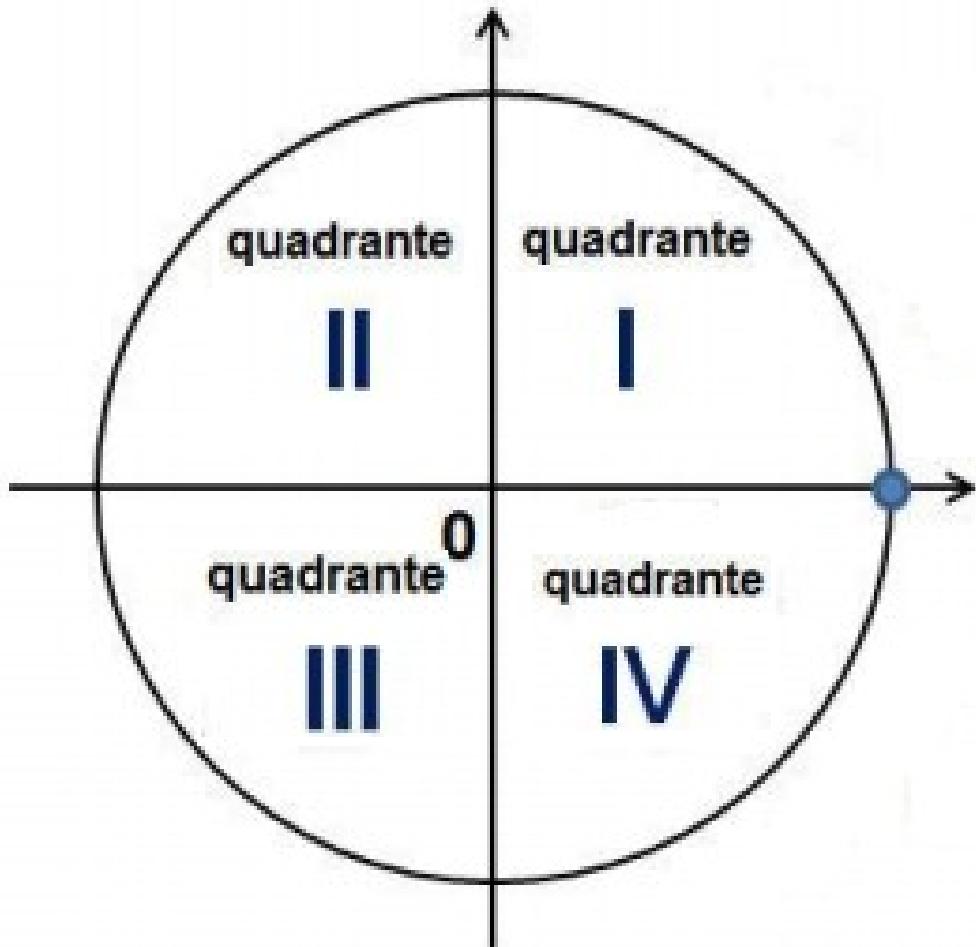
# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$   1

$780^\circ$

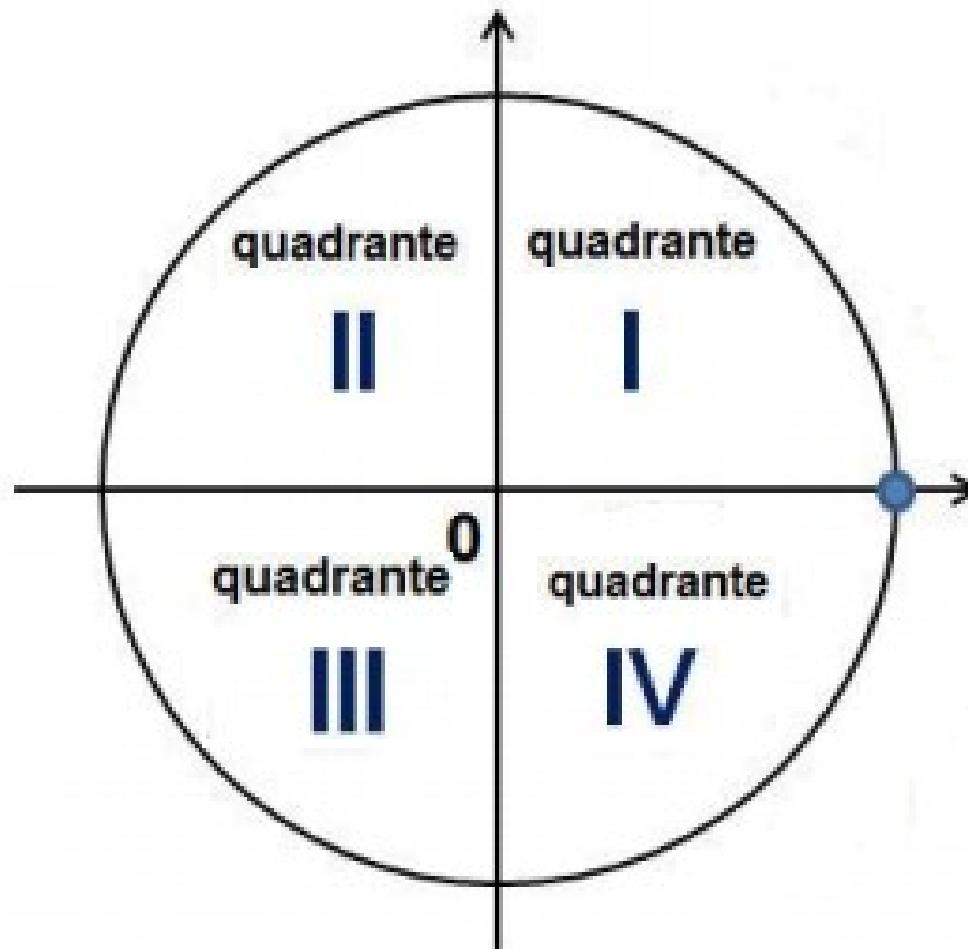
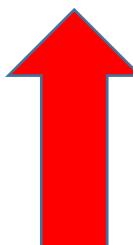
$780^\circ$    $360^\circ$   
 $(60^\circ)$   2



# Determine o quadrante

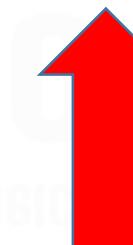
$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$  



$780^\circ$

$780^\circ$    $360^\circ$   
 $(60^\circ)$  



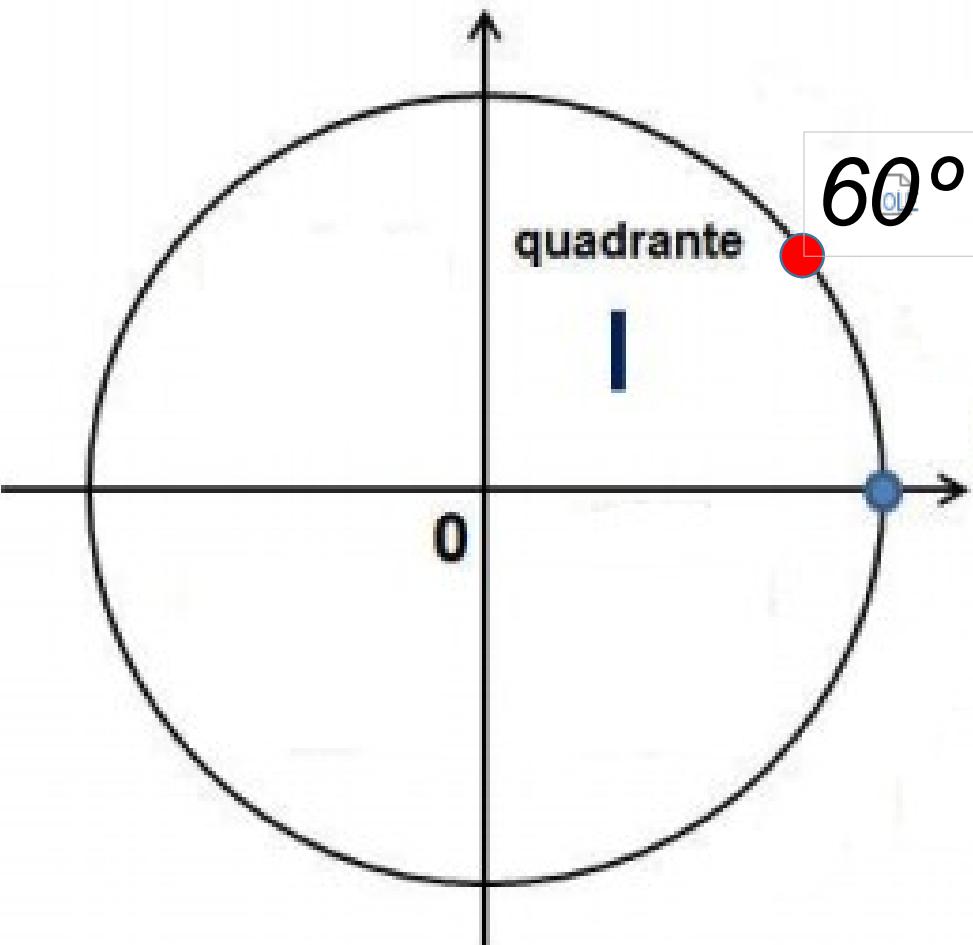
# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$   1

$780^\circ$

$780^\circ$    $360^\circ$   
 $(60^\circ)$   2



# Determine o quadrante

$420^\circ$

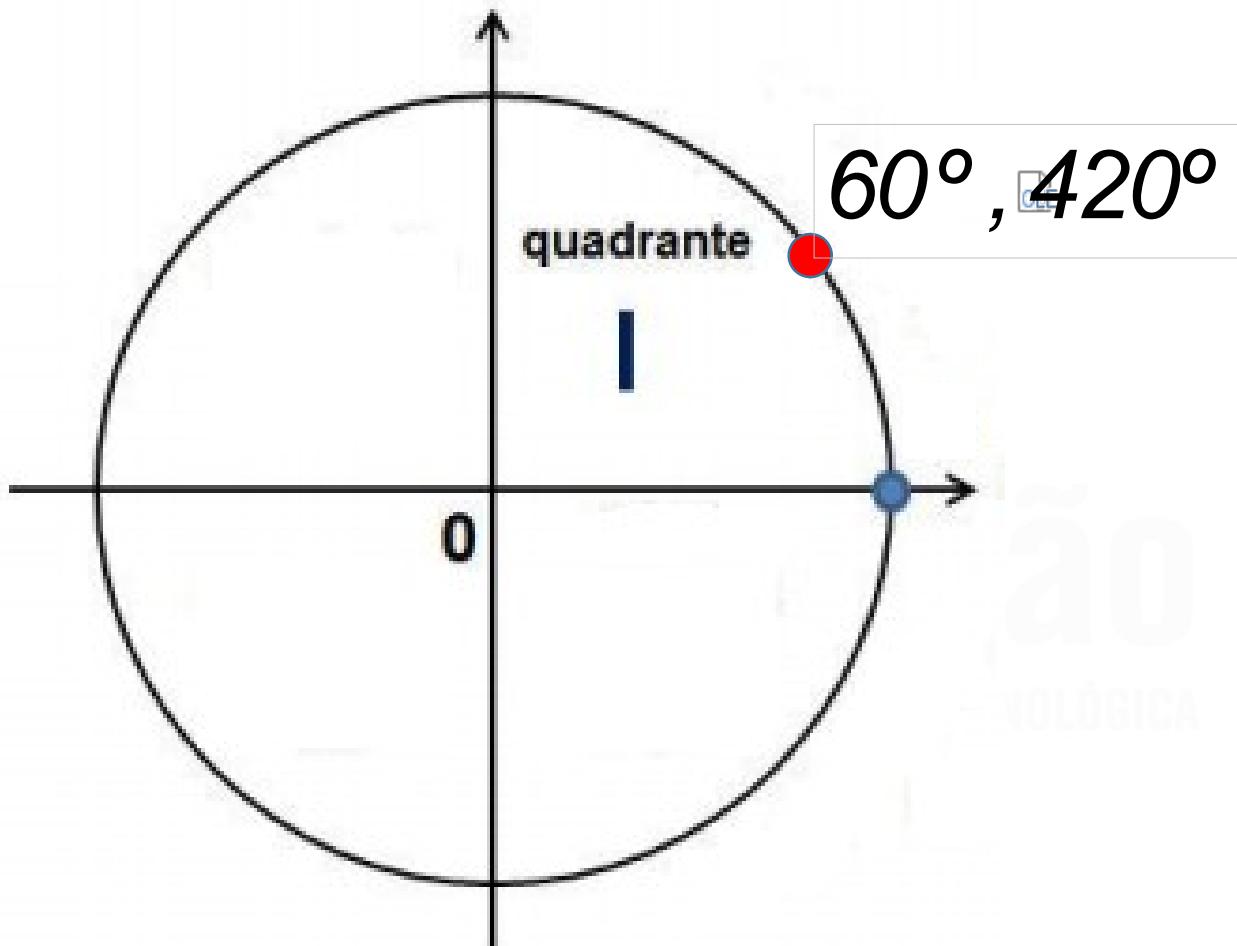
$420^\circ$    $360^\circ$  

$(60^\circ)$   1

$780^\circ$

$780^\circ$    $360^\circ$  

$(60^\circ)$   2



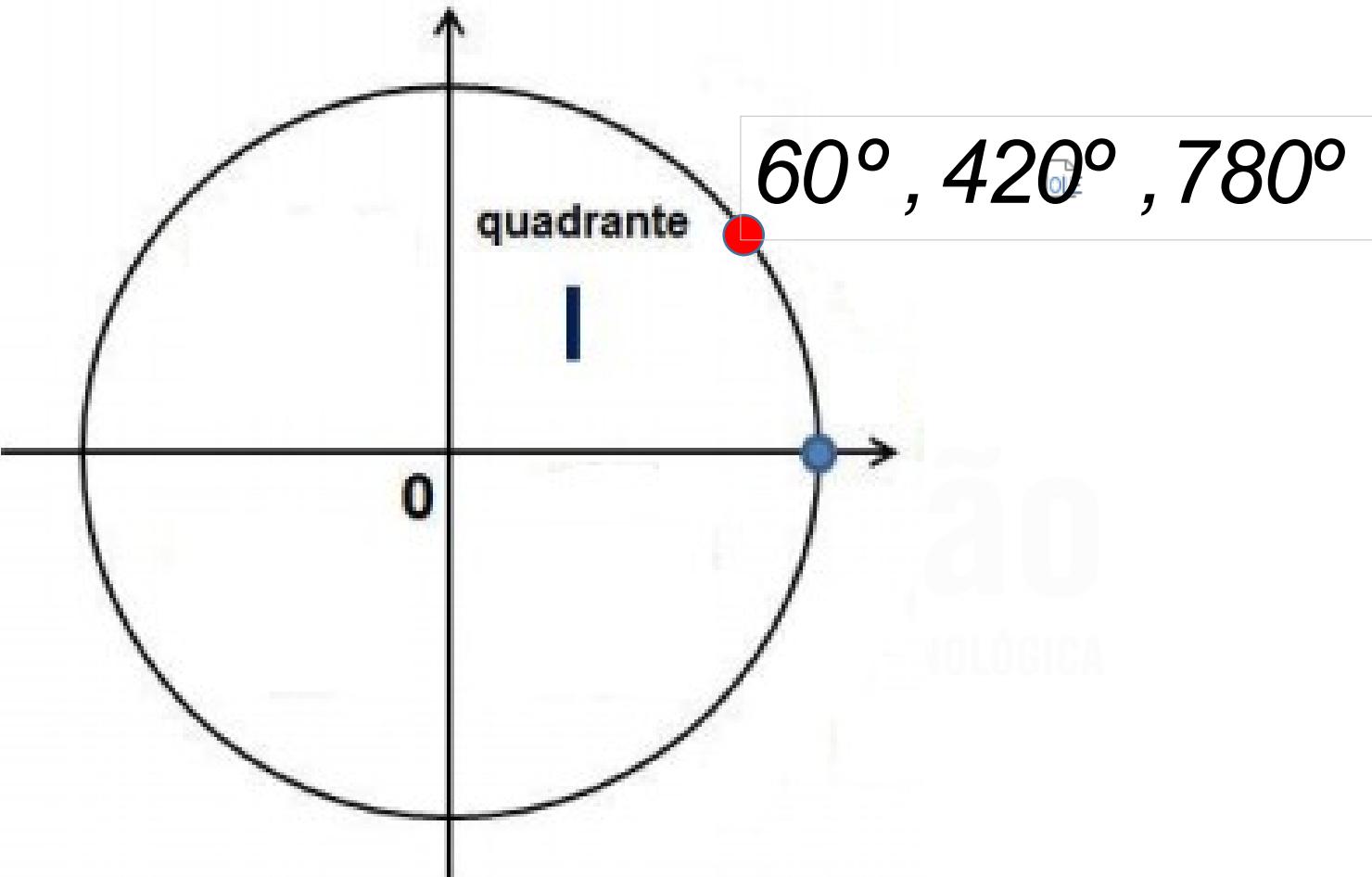
# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$   1

$780^\circ$

$780^\circ$    $360^\circ$   
 $(60^\circ)$   2



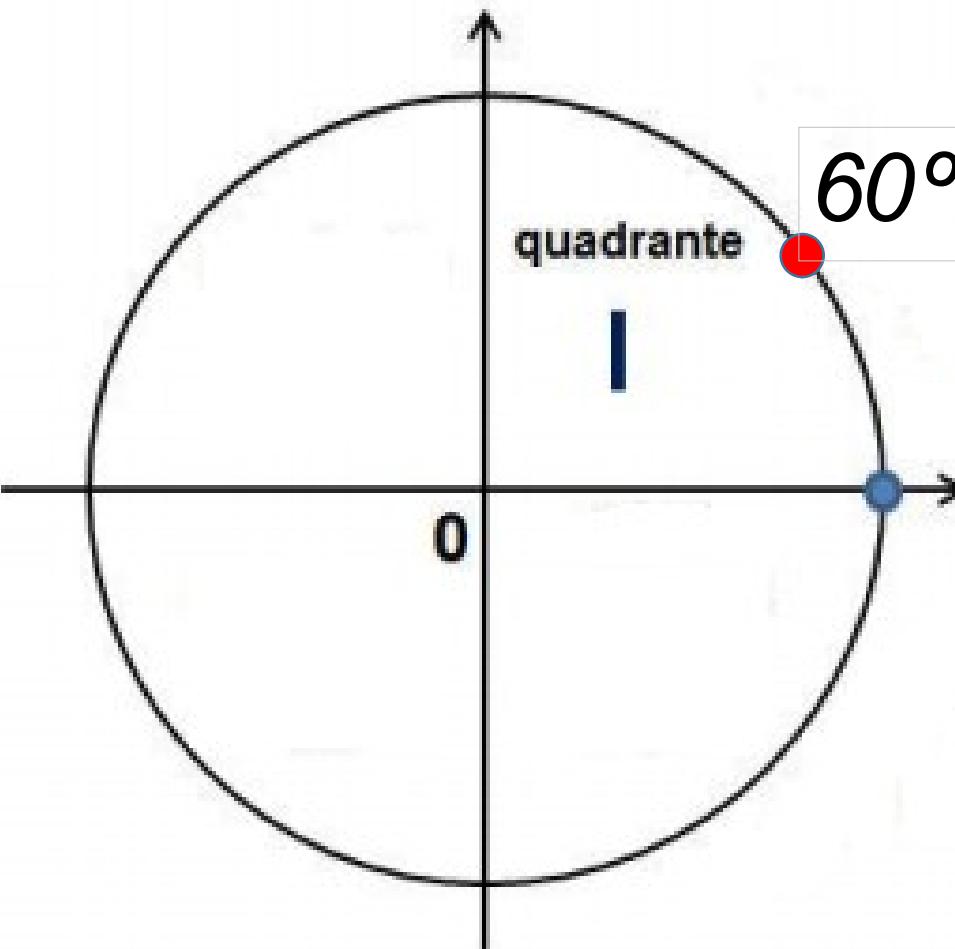
# Determine o quadrante

$420^\circ$

$420^\circ$    $360^\circ$   
 $(60^\circ)$   1

$780^\circ$

$780^\circ$    $360^\circ$   
 $(60^\circ)$   2



$60^\circ, 420^\circ, 780^\circ$

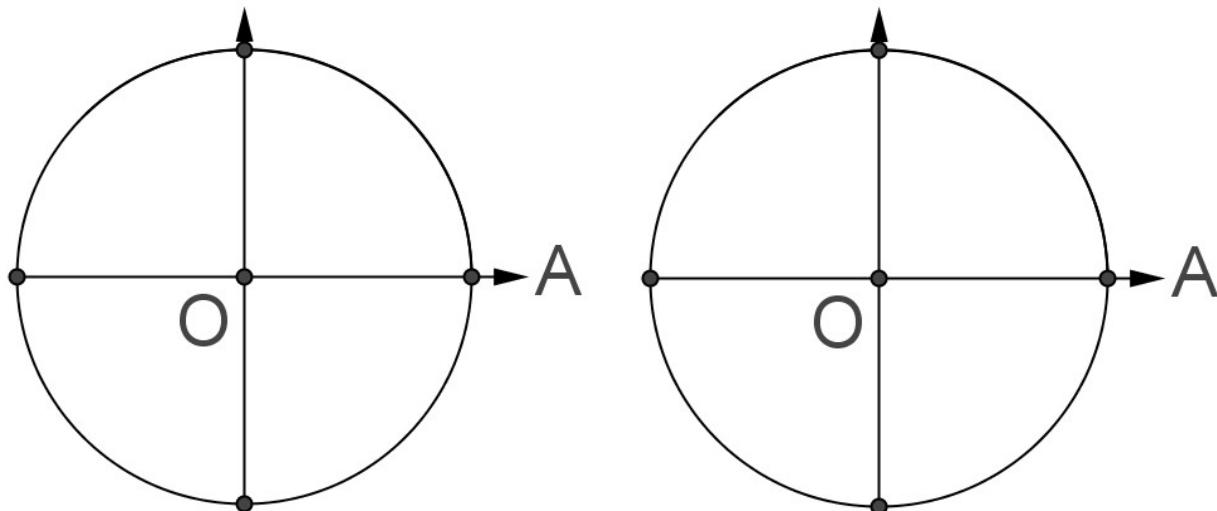
**$420^\circ$  e  $780^\circ$  são  
arcos congruos  
pois possuem a  
mesma  
localização na  
circunferência**

# Arcos Congruos

Dois arcos trigonométricos são chamados de congruos quando eles têm as mesmas extremidades e se diferenciam apenas pela quantidade de voltas inteiras dadas no ciclo trigonométrico.

**Exemplo 1:** Os arcos de medidas iguais a  $420^\circ$  e  $780^\circ$  são congruentes.

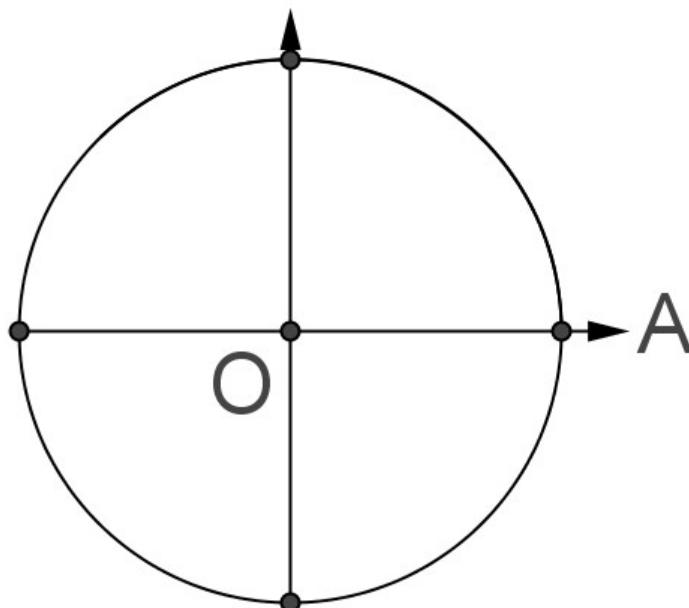
**1<sup>a</sup> Determinação Positiva** → é o resto da divisão da medida de um arco maior que  $360^\circ$  por  $360^\circ$ .



## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

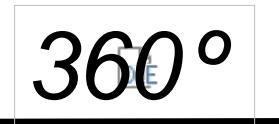


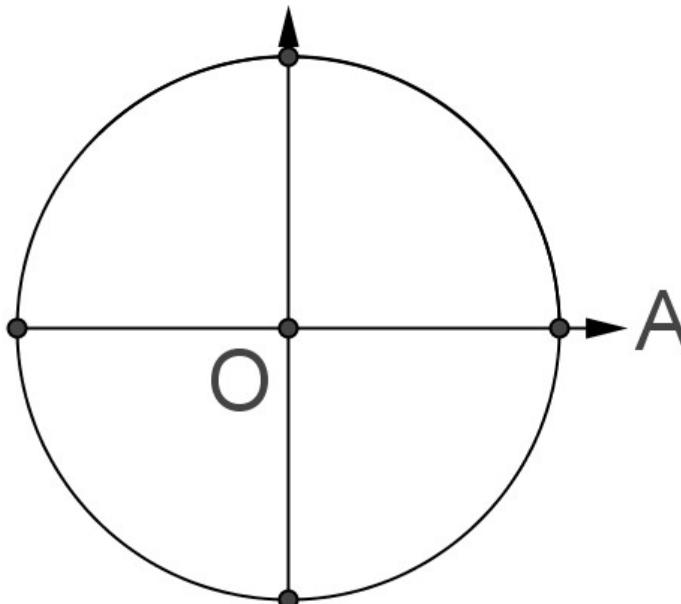
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$2.550^\circ$    $360^\circ$

$1.470^\circ$    $360^\circ$



## ATIVIDADE

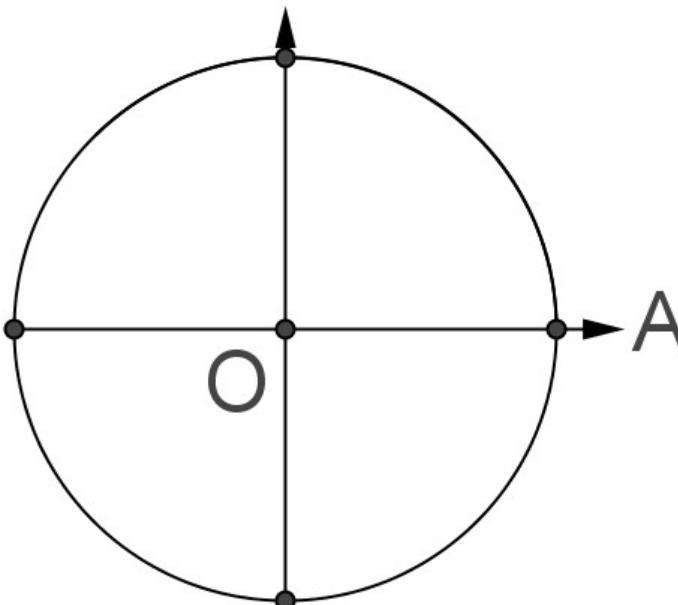
## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$2.550^\circ$    $360^\circ$

7 voltas

$1.470^\circ$    $360^\circ$



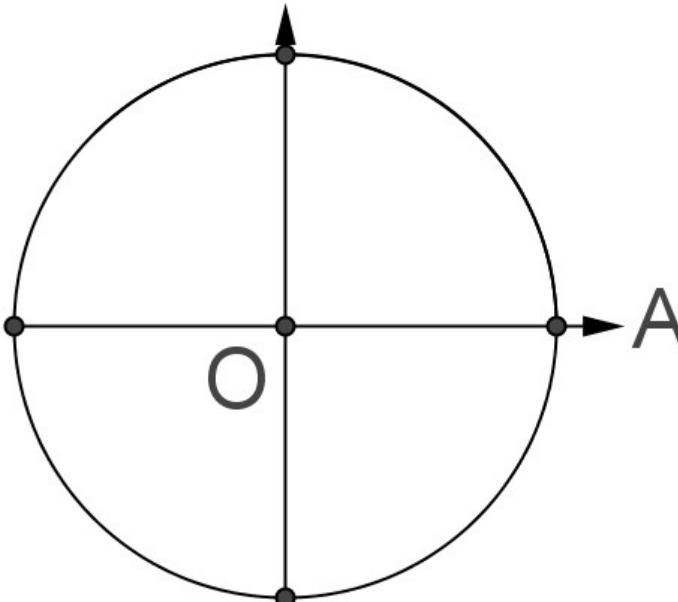
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$$\begin{array}{l} 2.550^\circ \quad | \quad 360^\circ \\ \text{---} \quad \quad \quad \text{---} \\ (30^\circ) \quad \quad \quad 7 \text{ voltas} \end{array}$$

$$\begin{array}{l} 1.470^\circ \quad | \quad 360^\circ \\ \text{---} \quad \quad \quad \text{---} \end{array}$$



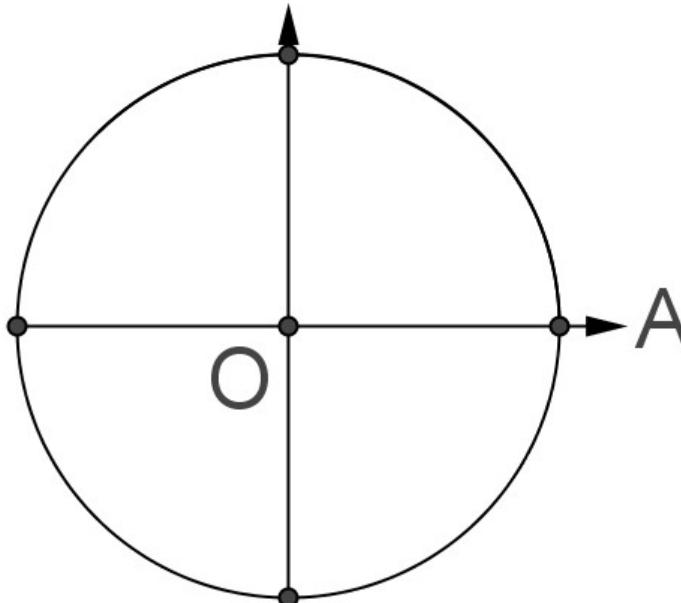
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$2.550^\circ$    $360^\circ$   
( $30^\circ$ )  7 voltas

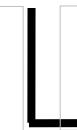
$1.470^\circ$    $360^\circ$   
 4 voltas



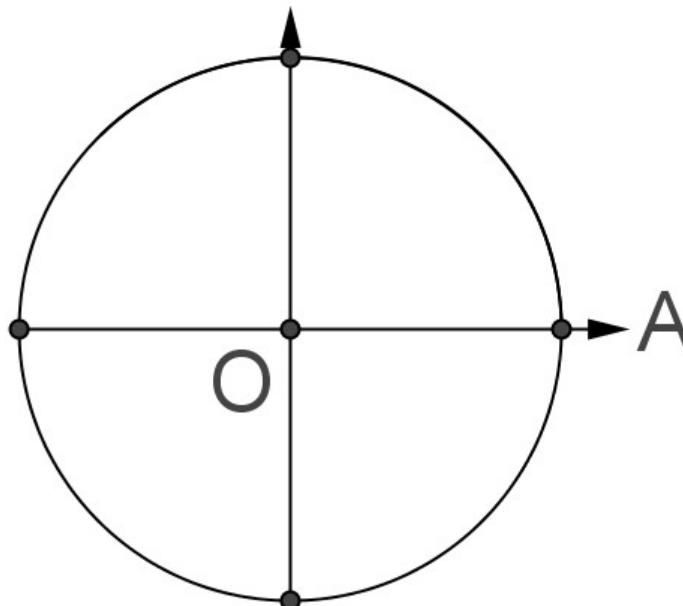
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$2.550^\circ$    $360^\circ$   
( $30^\circ$ )  7 voltas

$1.470^\circ$    $360^\circ$   
( $30^\circ$ )  4 voltas



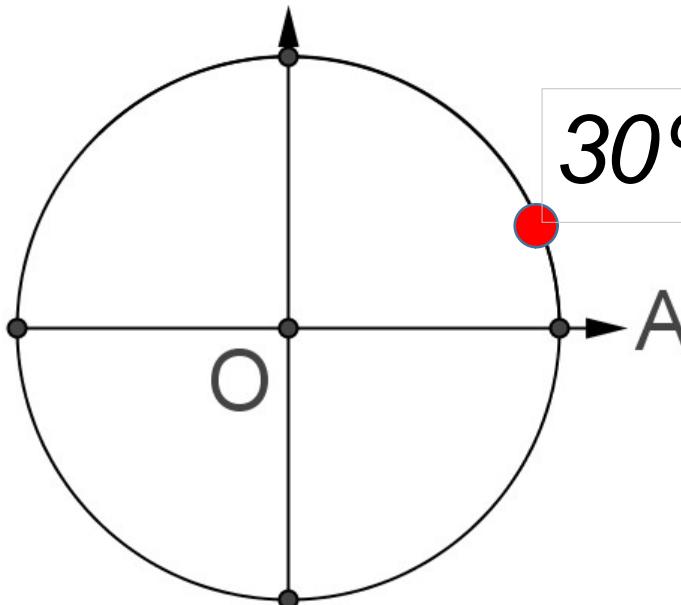
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$$\begin{array}{l} 2.550^\circ \quad | \quad 360^\circ \\ \text{---} \quad \quad \quad \text{---} \\ (30^\circ) \quad \quad \quad 7 \text{ voltas} \end{array}$$

$$\begin{array}{l} 1.470^\circ \quad | \quad 360^\circ \\ \text{---} \quad \quad \quad \text{---} \\ (30^\circ) \quad \quad \quad 4 \text{ voltas} \end{array}$$



$30^\circ, 1.470^\circ, 2.550^\circ$

**São Arcos  
Congruos.**

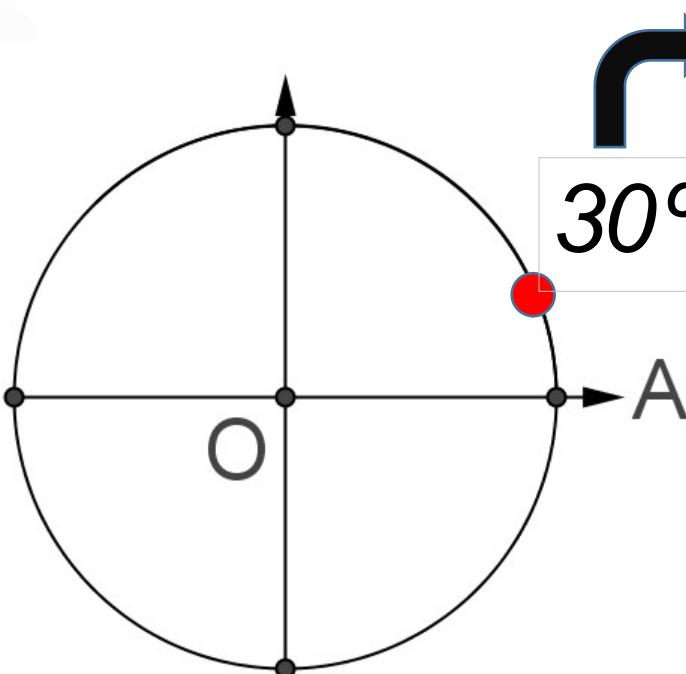
## ATIVIDADE

## Questão 01

Verifique se os arcos de medidas iguais a  $2550^\circ$  e  $1470^\circ$  são congruos.

$$\begin{array}{r} 2.550^\circ \\ \text{---} \\ (30^\circ) \end{array} \quad \begin{array}{r} 360^\circ \\ \text{---} \\ 7 \text{ voltas} \end{array}$$

$$\begin{array}{r} 1.470^\circ \\ \text{---} \\ (30^\circ) \end{array} \quad \begin{array}{r} 360^\circ \\ \text{---} \\ 4 \text{ voltas} \end{array}$$



1<sup>a</sup> DETERMINAÇÃO (+)

$30^\circ, 1.470^\circ, 2.550^\circ$

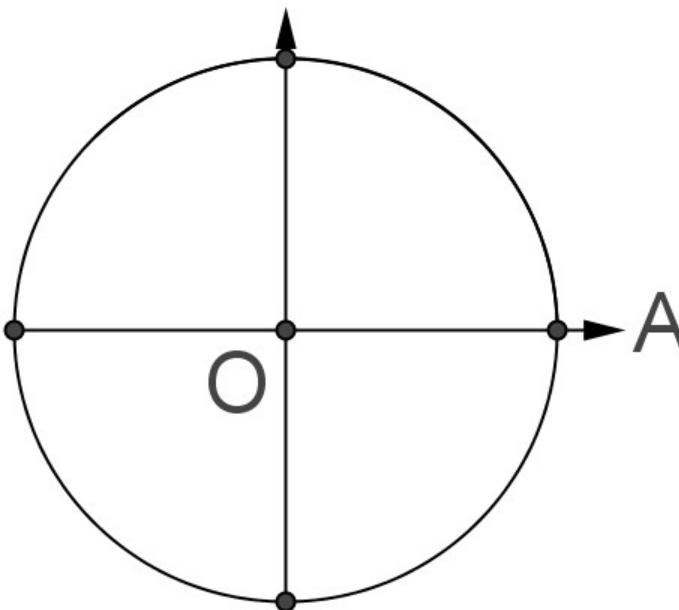
*São Arcos  
Congruos.*

**OBS: O RESTO DA DIVISÃO É CHAMADO DE 1<sup>a</sup> DETERMINAÇÃO POSITIVA**

## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.



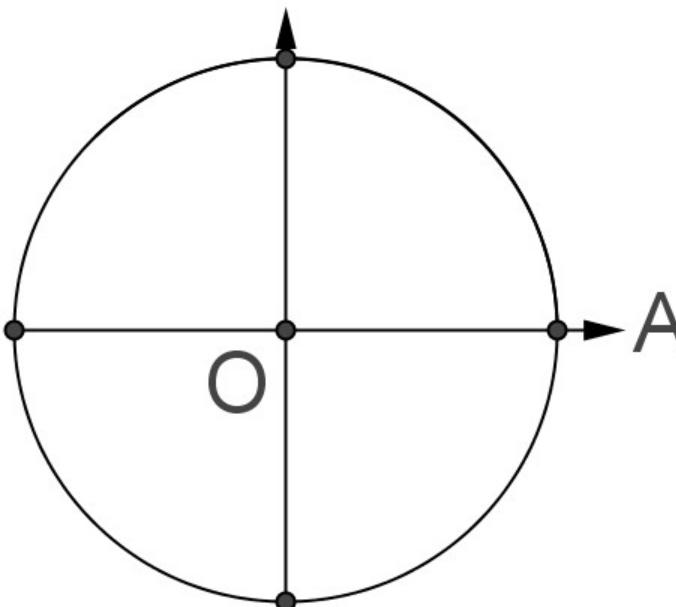
## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

$1.380^\circ$    $360^\circ$  

$3.540^\circ$    $360^\circ$  



## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

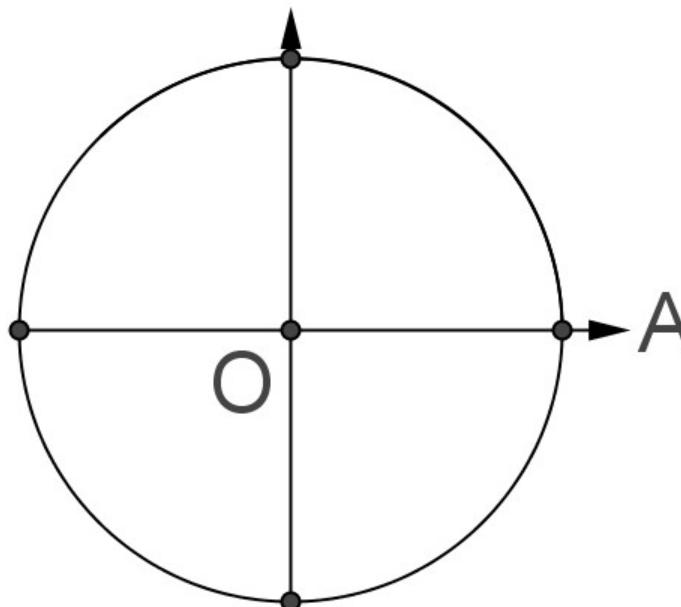
$1.380^\circ$

$360^\circ$

3 voltas

$3.540^\circ$

$360^\circ$



## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

$1.380^\circ$

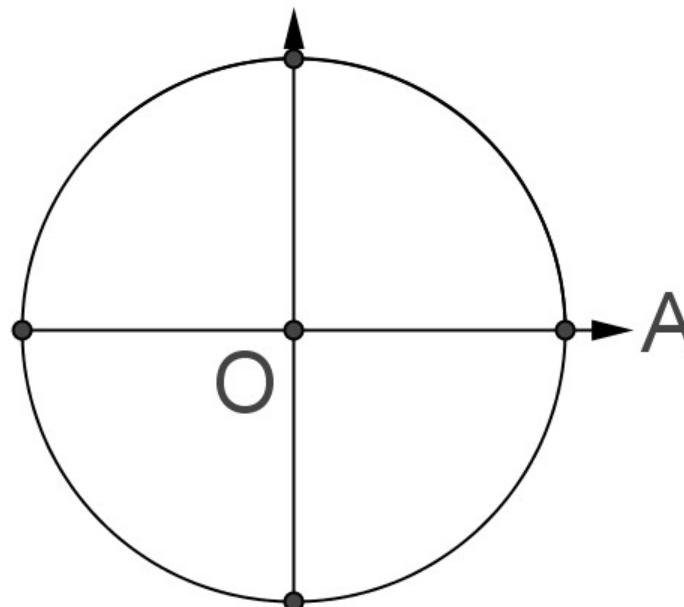
$360^\circ$

$(300^\circ)$

3 voltas

$3.540^\circ$

$360^\circ$



## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

$1.380^\circ$

$360^\circ$

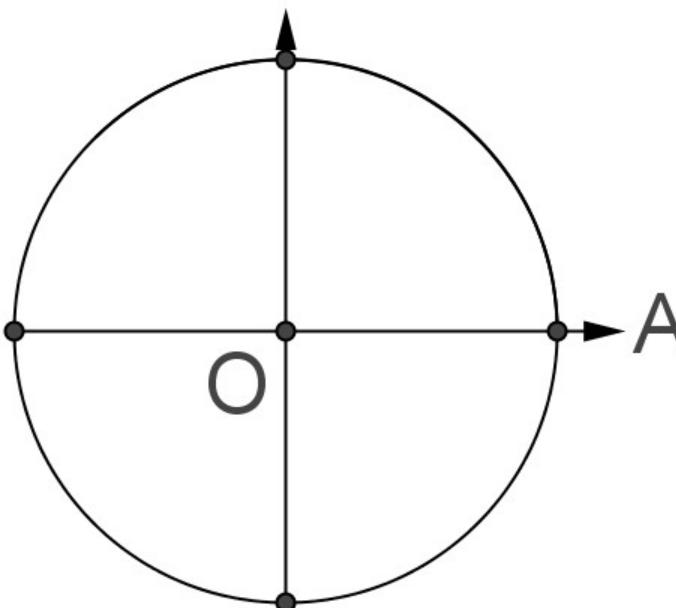
$(300^\circ)$

3 voltas

$3.540^\circ$

$360^\circ$

9 voltas



## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

$1.380^\circ$

$360^\circ$

$(300^\circ)$

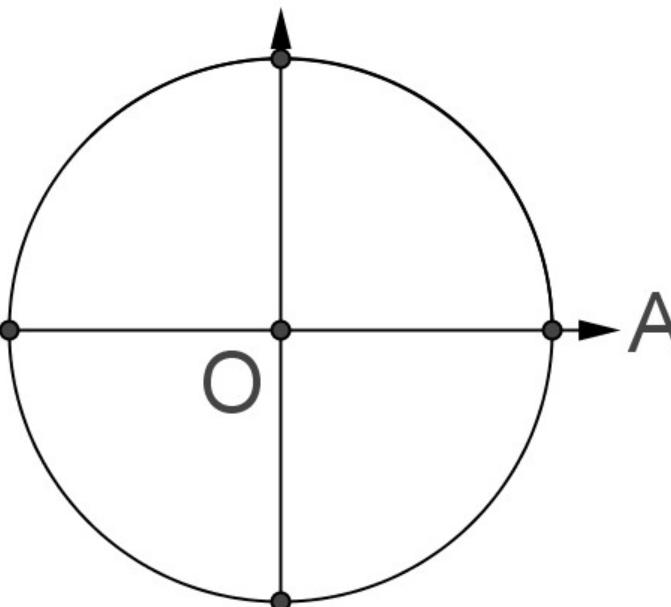
3 voltas

$3.540^\circ$

$360^\circ$

$(300^\circ)$

9 voltas



## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são congruos.

$1.380^\circ$

$360^\circ$

$(300^\circ)$

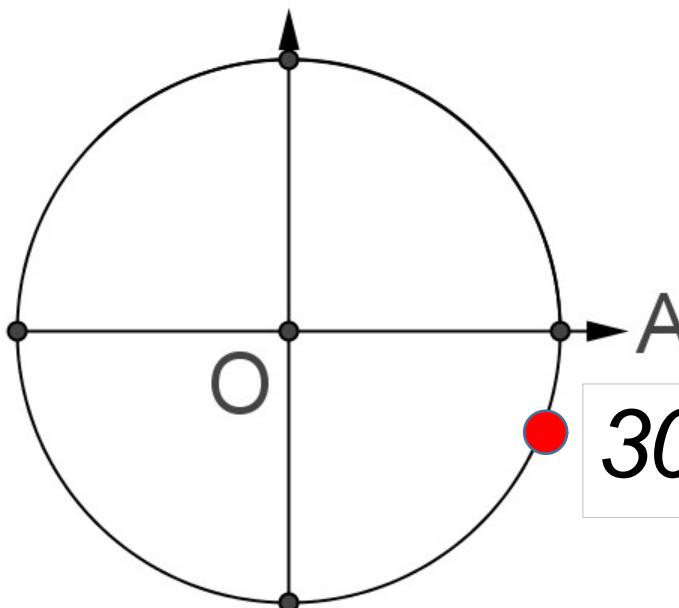
3 voltas

$3.540^\circ$

$360^\circ$

$(300^\circ)$

9 voltas



**São Arcos  
Congruos.**

$300^\circ, 1.380^\circ, 3.540^\circ$

## ATIVIDADE

## Questão 02

Verifique se os arcos de medidas iguais a  $1380^\circ$  e  $3540^\circ$  são côngruos.

$1.380^\circ$

$360^\circ$

$(300^\circ)$

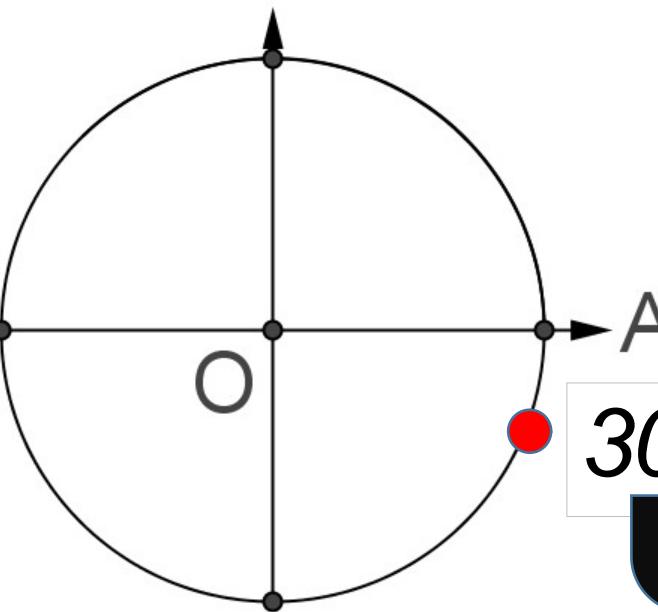
3 voltas

$3.540^\circ$

$360^\circ$

$(300^\circ)$

9 voltas



**São Arcos  
Côngruos.**

$300^\circ, 1.380^\circ, 3.540^\circ$

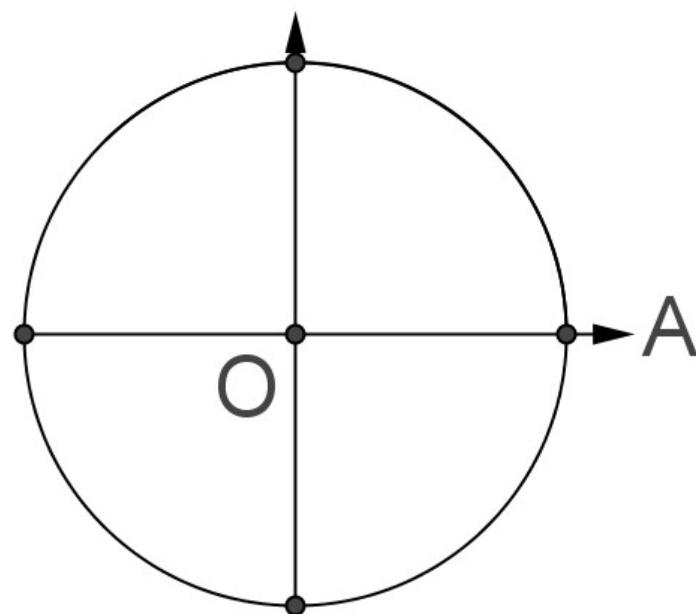
**1<sup>a</sup> DETERMINAÇÃO (+)**

**OBS: O RESTO DA DIVISÃO É CHAMADO DE 1<sup>a</sup> DETERMINAÇÃO POSITIVA**

## ATIVIDADE

## Questão 03

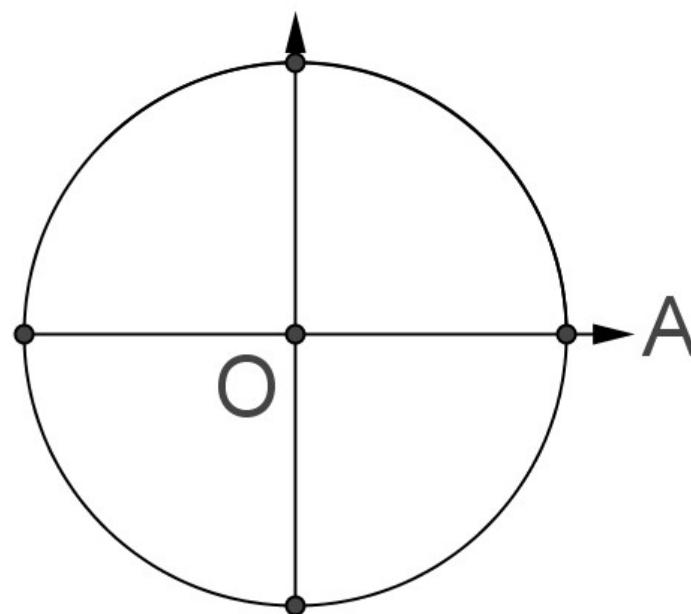
Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.



## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.



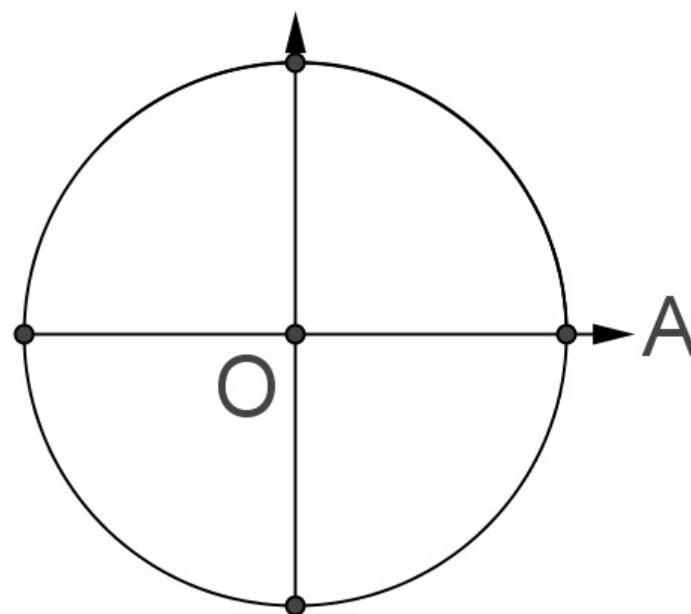
$$4.080^\circ \quad | \quad 360^\circ$$

$$4.800^\circ \quad | \quad 360^\circ$$

## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.



$$4.080^\circ \Big| 360^\circ$$

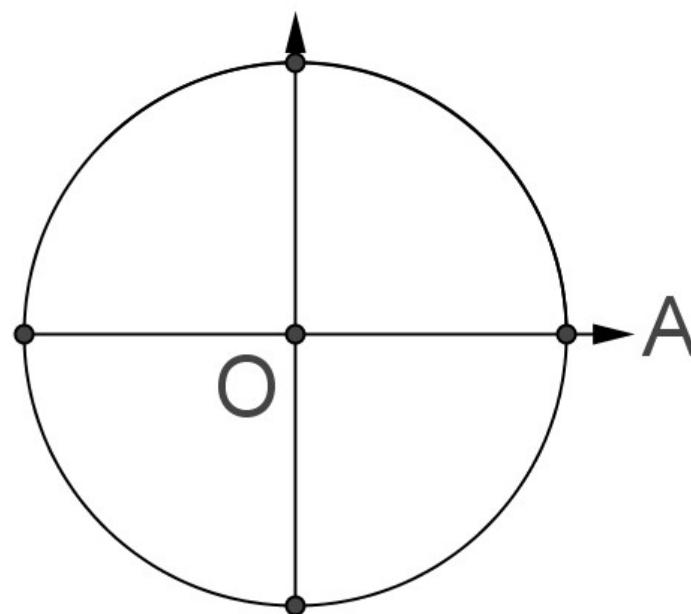
11 voltas

$$4.800^\circ \Big| 360^\circ$$

## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.



$4.080^\circ$

$(120^\circ)$

$360^\circ$

11 voltas

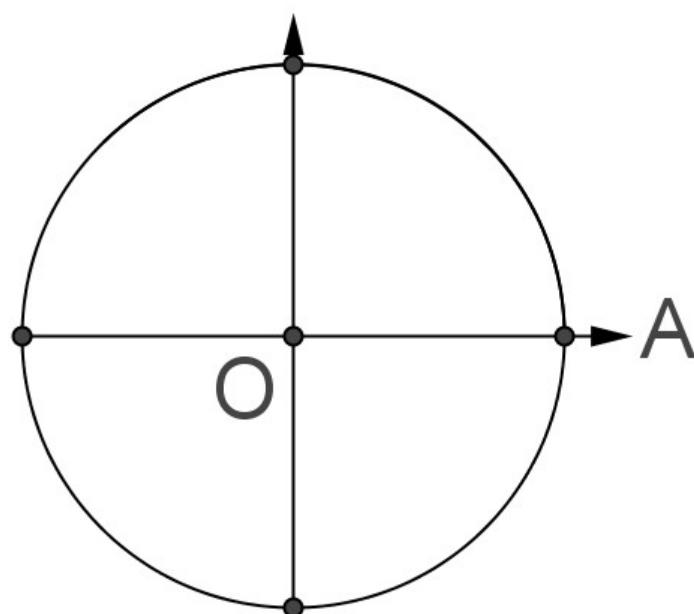
$4.800^\circ$

$360^\circ$

## ATIVIDADE

## Questão 03

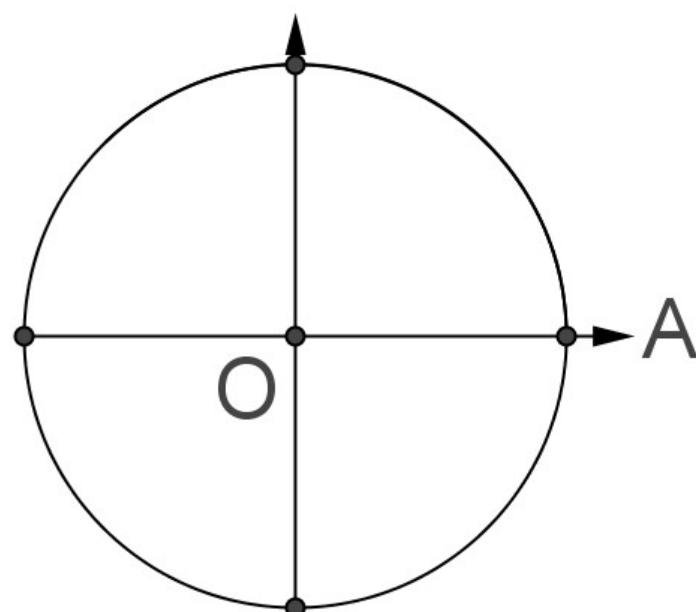
Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.

 $4.080^\circ$  $(120^\circ)$  $360^\circ$  $11 \text{ voltas}$  $4.800^\circ$  $360^\circ$  $13 \text{ voltas}$

## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.



$4.080^\circ$

$(120^\circ)$

$360^\circ$

11 voltas

$4.800^\circ$

$(120^\circ)$

$360^\circ$

13 voltas

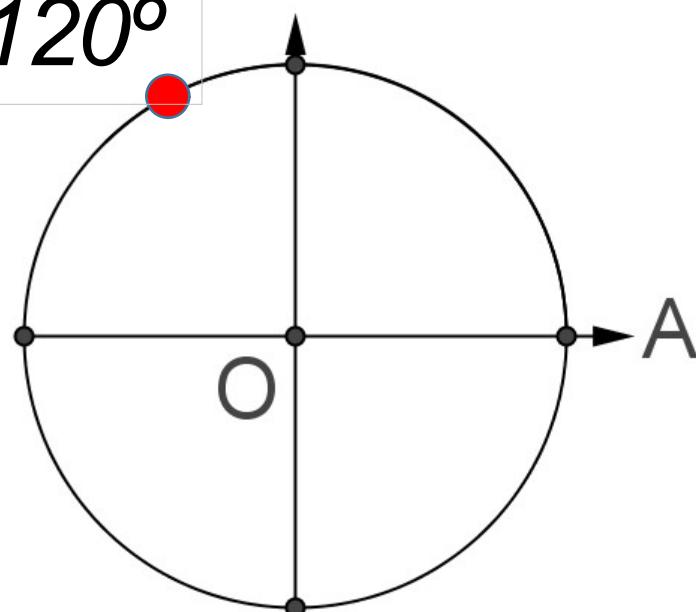
## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.

$4.800^\circ$ ,  $4.080^\circ$ ,  $120^\circ$

*São Arcos  
Congruos.*



$4.080^\circ$

$(120^\circ)$

$360^\circ$

*11 voltas*

$4.800^\circ$

$(120^\circ)$

$360^\circ$

*13 voltas*

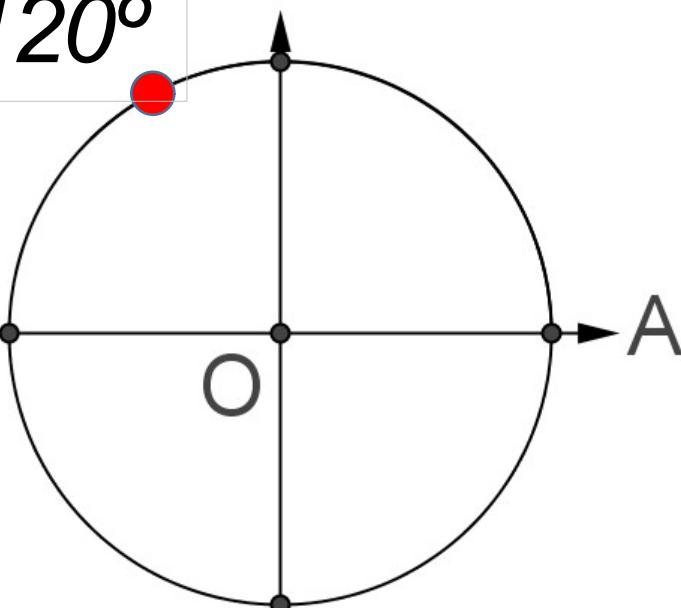
## ATIVIDADE

## Questão 03

Verifique se os arcos de medidas iguais a  $4080^\circ$  e  $4800^\circ$  são congruos.

$4.800^\circ$ ,  $4.080^\circ$ ,  $120^\circ$

*São Arcos  
Congruos.*



1<sup>a</sup> DETERMINAÇÃO (+)

$4.080^\circ$

$(120^\circ)$

$360^\circ$

11 voltas

$4.800^\circ$

$(120^\circ)$

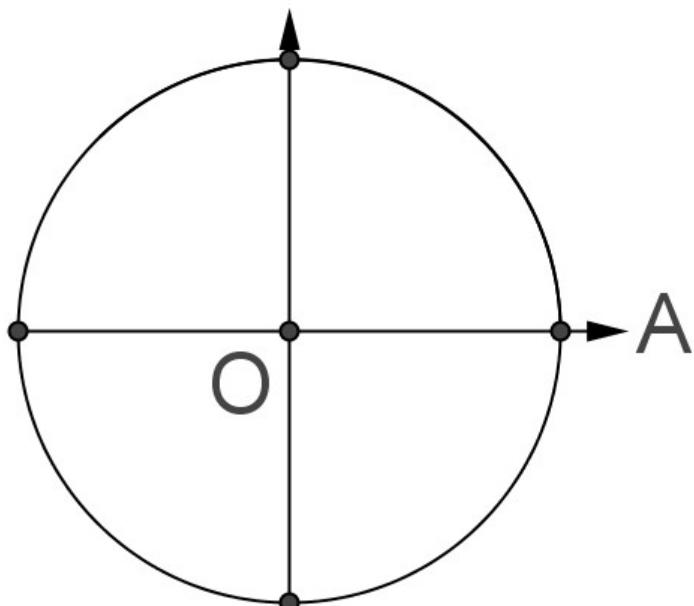
$360^\circ$

13 voltas

## ATIVIDADE

## Questão 04

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $1415^\circ$ .

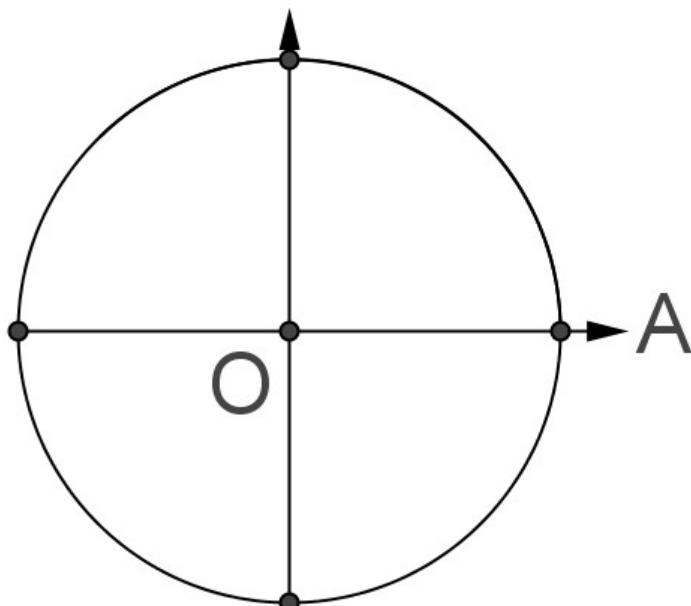


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## ATIVIDADE

## Questão 04

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $1415^\circ$ .



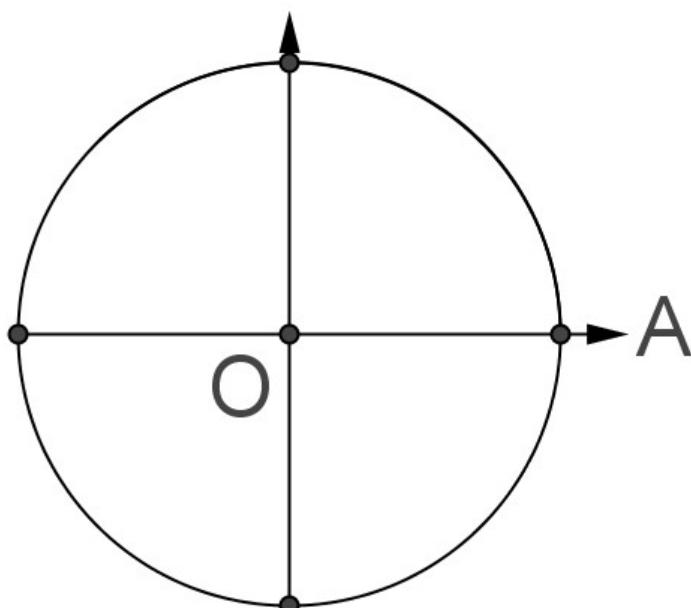
$$1.415^\circ \quad | \quad 360^\circ$$

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## ATIVIDADE

## Questão 04

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $1415^\circ$ .



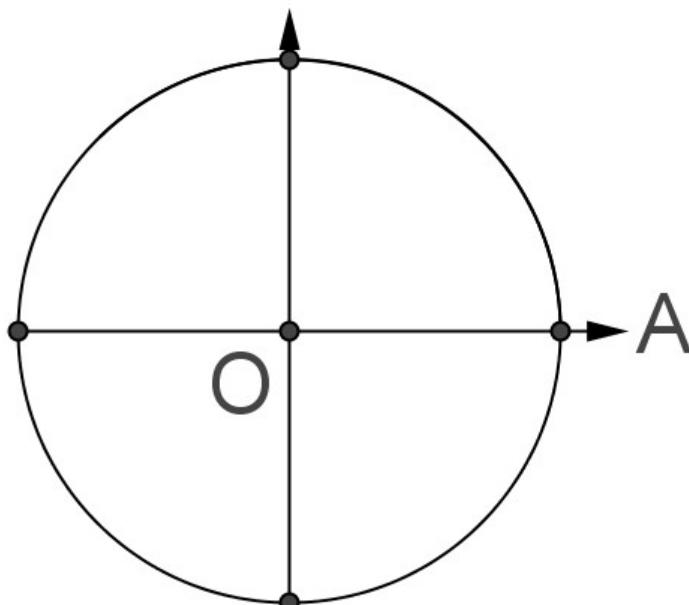
$$1.415^\circ \quad \boxed{360^\circ}$$

3 voltas

## ATIVIDADE

## Questão 04

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $1415^\circ$ .



$1.415^\circ$

$(335^\circ)$

$360^\circ$

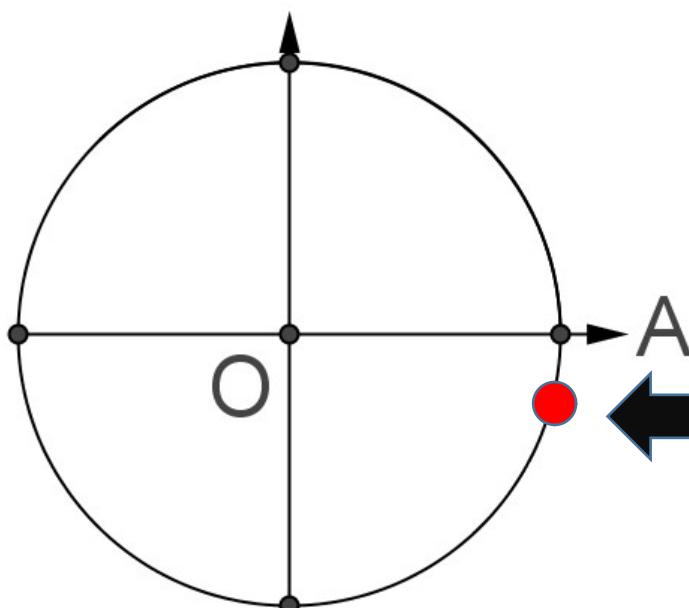
3 voltas

PROGRAMA DE MEDAÇÃO TÉCNICA

## ATIVIDADE

## Questão 04

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $1415^\circ$ .



$1.415^\circ$

$(335^\circ)$

$360^\circ$

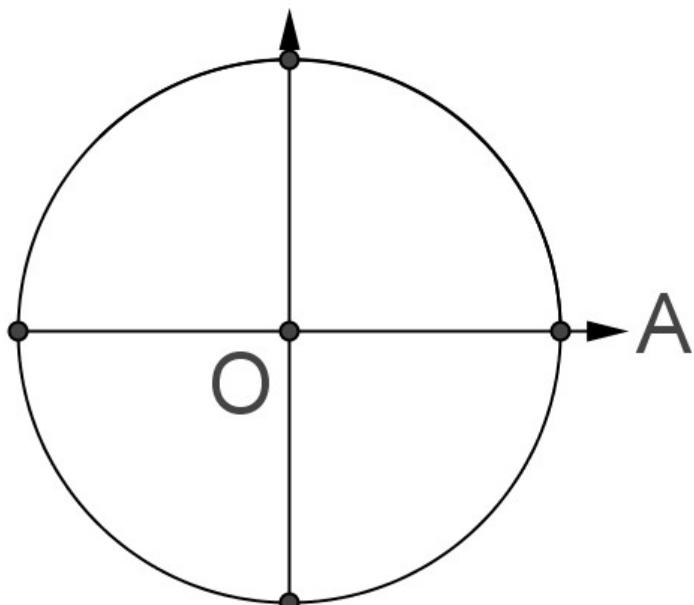
3 voltas

1<sup>a</sup> DETERMINAÇÃO (+)

## ATIVIDADE

## Questão 05

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $3234^\circ$ .

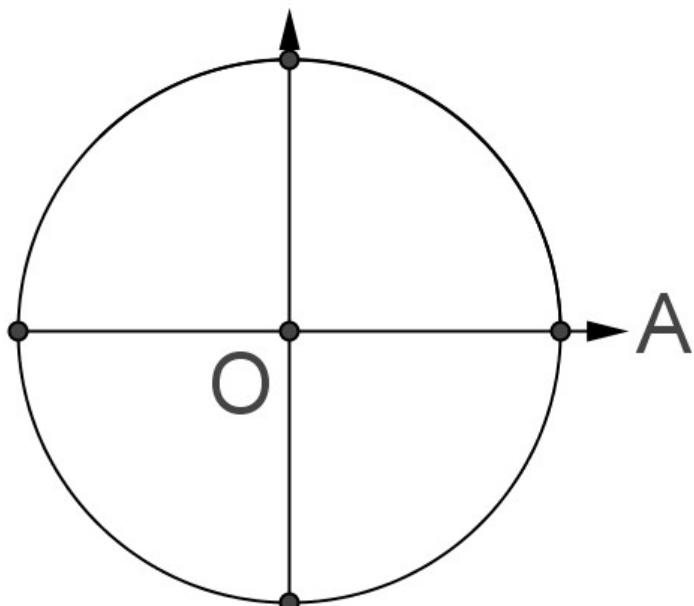


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## ATIVIDADE

## Questão 05

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $3234^\circ$ .



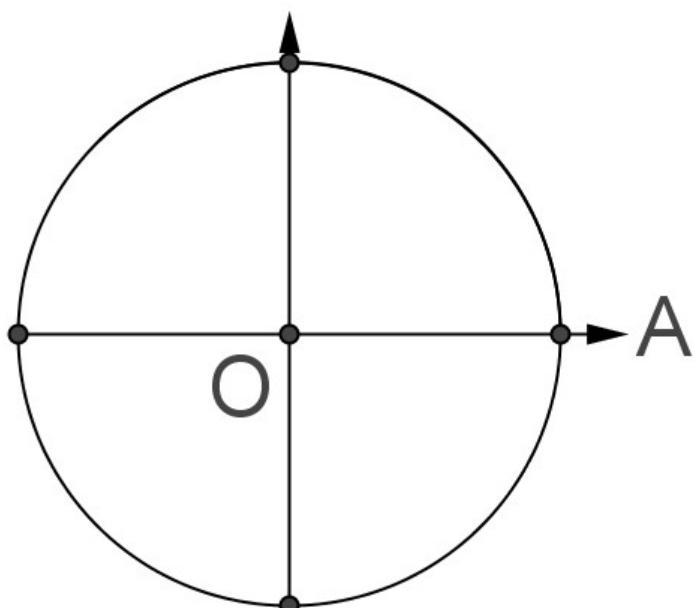
$$3.234^\circ \quad | \quad 360^\circ$$

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## ATIVIDADE

## Questão 05

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $3234^\circ$ .



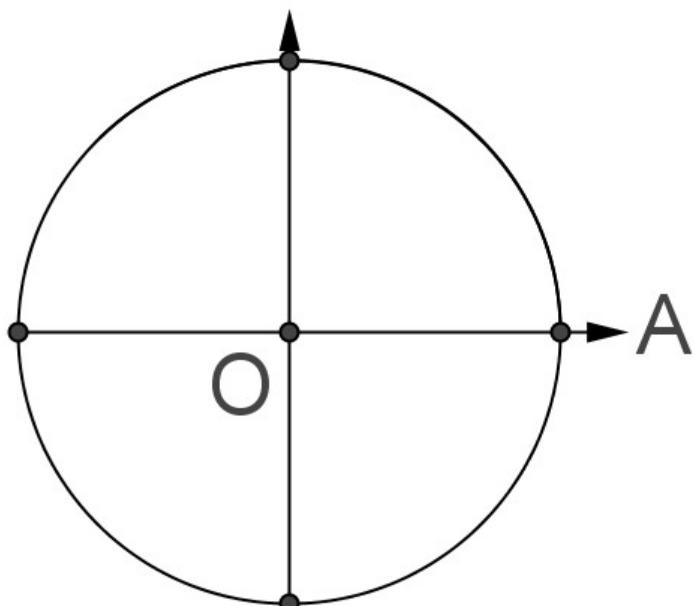
$$3.234^\circ \quad | \quad 360^\circ$$

8 voltas

## ATIVIDADE

## Questão 05

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $3234^\circ$ .



$3.234^\circ$

$(354^\circ)$

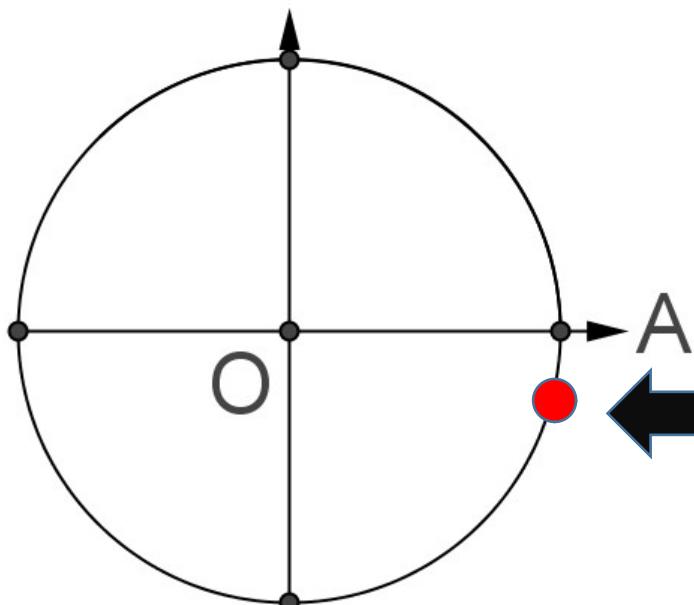
$360^\circ$

8 voltas

## ATIVIDADE

## Questão 05

Determine a 1<sup>a</sup> determinação positiva do arco de medida  $3234^\circ$ .



$3.234^\circ$

$(354^\circ)$

$360^\circ$

8 voltas

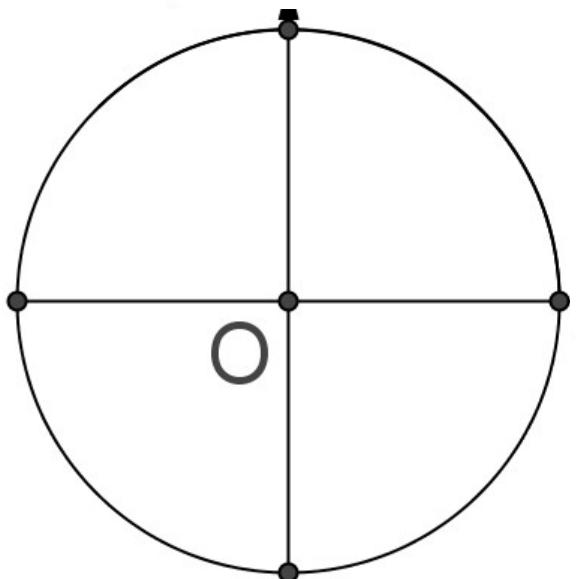
1<sup>a</sup> DETERMINAÇÃO (+)

## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



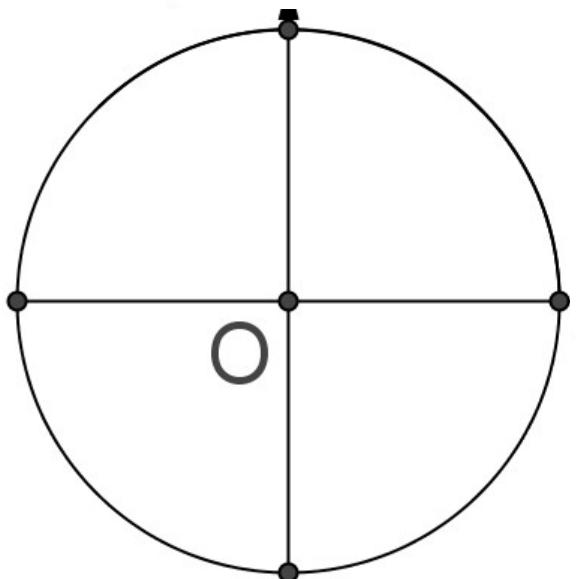
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## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



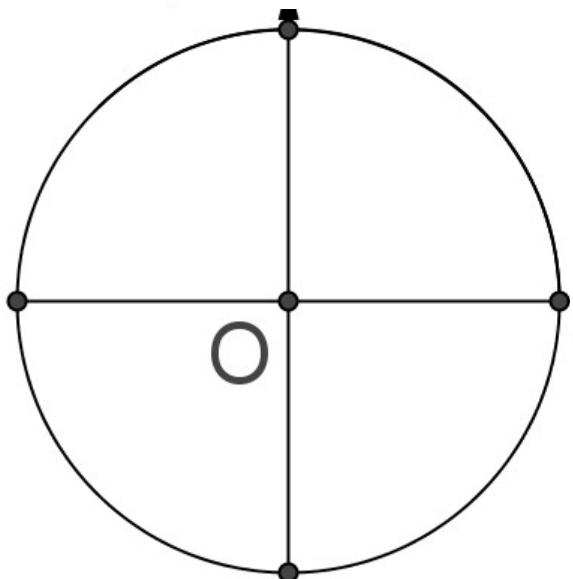
$$\frac{37\pi}{5} \text{ rad} \Rightarrow$$

## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



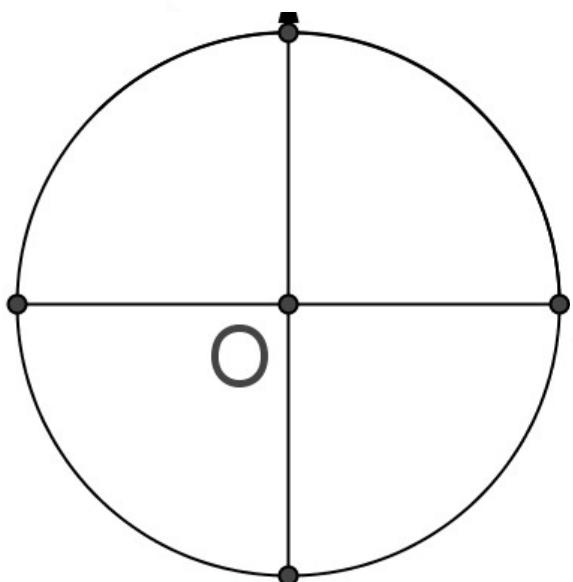
$$\frac{37\pi}{5} \text{ rad} \Rightarrow \frac{?}{5} + \frac{?}{5}$$

## ATIVIDADE

## Questão 06

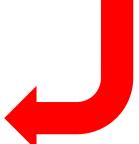
Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow \frac{?}{5} + \frac{?}{5}$$

O resultado tem  
que ser **PAR**

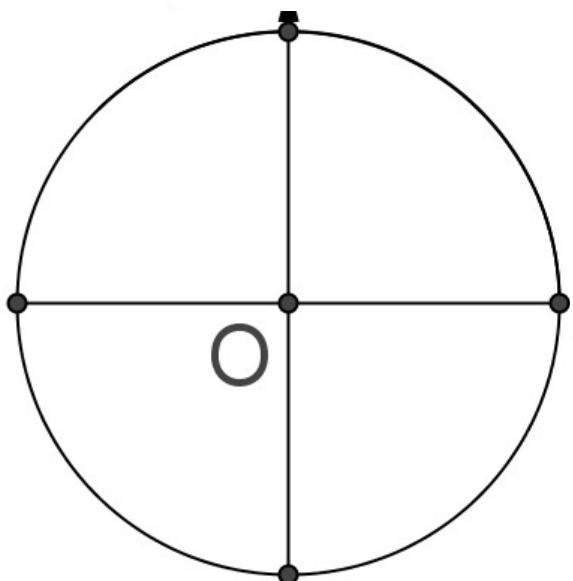


## ATIVIDADE

## Questão 06

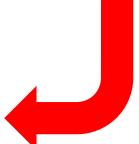
Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow \frac{30\pi}{5} + \frac{?}{5}$$

O resultado tem  
que ser **PAR**

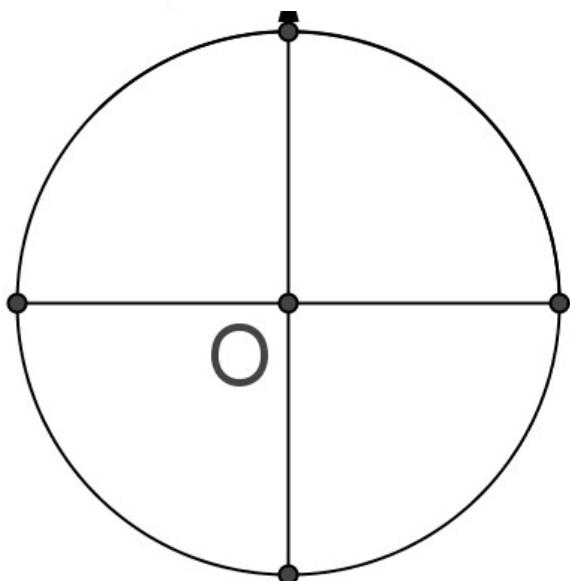


## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow \frac{30\pi}{5} + \frac{?}{5}$$

O resultado tem  
que ser **PAR**

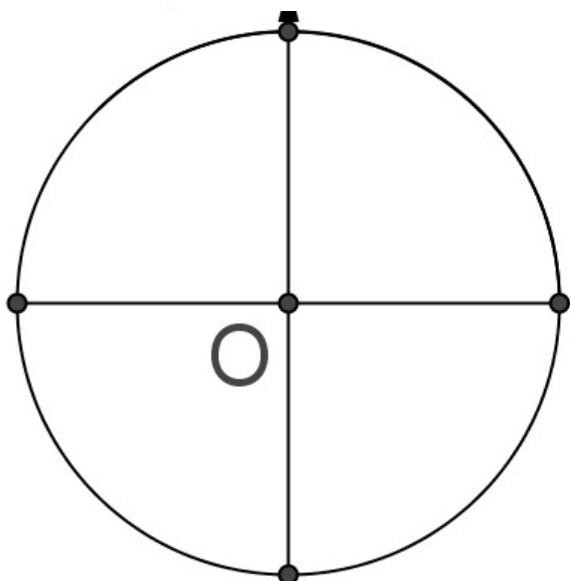
$$\frac{30\pi}{5} + \frac{?}{5}$$
$$6\pi \text{ rad}$$

## ATIVIDADE

## Questão 06

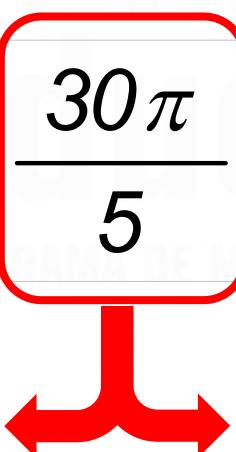
Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow \frac{30\pi}{5} + \frac{?}{5}$$

O resultado tem  
que ser **PAR**



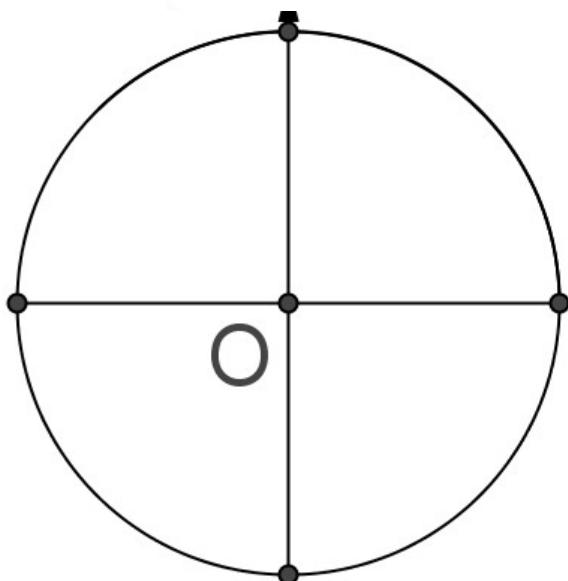
$$6\pi \text{ rad} \Rightarrow 3 \text{ voltas}$$

## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow$$

$$\frac{30\pi}{5} + \frac{?}{5}$$

O resultado tem  
que ser **PAR**



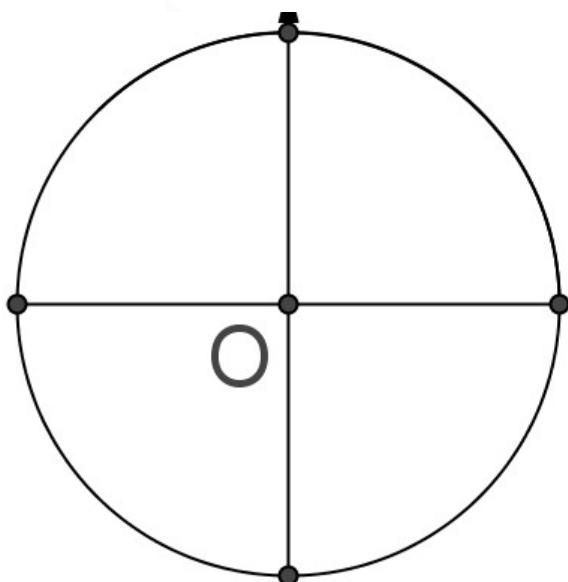
$$6\pi \text{ rad} \Rightarrow 3 \text{ voltas}$$

## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

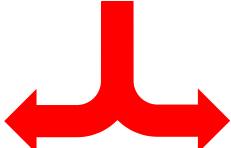
$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{37\pi}{5} \text{ rad} \Rightarrow$$

$$\frac{30\pi}{5} + \frac{7\pi}{5}$$

O resultado tem  
que ser **PAR**



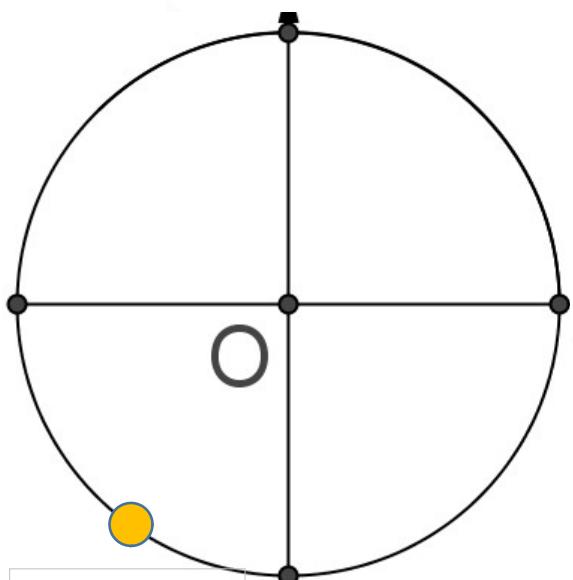
$$6\pi \text{ rad} \Rightarrow 3 \text{ voltas}$$

## ATIVIDADE

## Questão 06

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{37\pi}{5} \text{ rad.}$$



$$\frac{7\pi}{5} \text{ rad}$$

O resultado tem  
que ser **PAR**

$$\frac{37\pi}{5} \text{ rad} \Rightarrow$$

$$\frac{30\pi}{5} + \frac{7\pi}{5}$$

1<sup>a</sup> DETERMINAÇÃO (+)

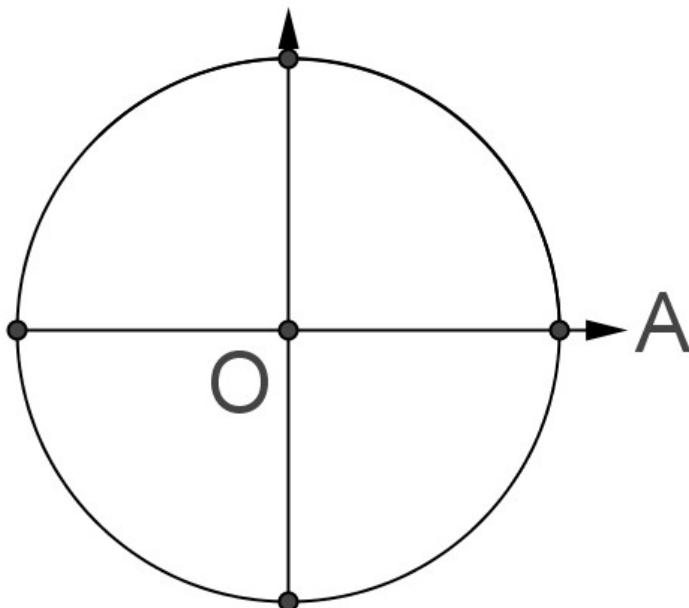
$$6\pi \text{ rad} \Rightarrow 3 \text{ voltas}$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



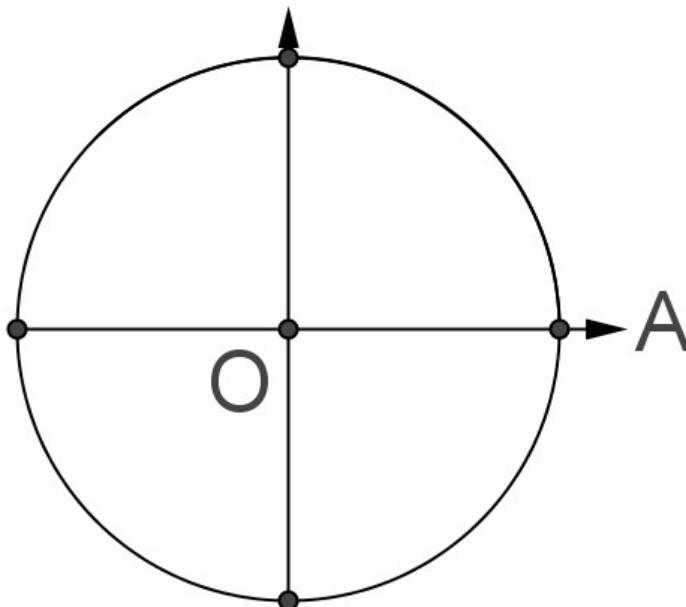
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## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



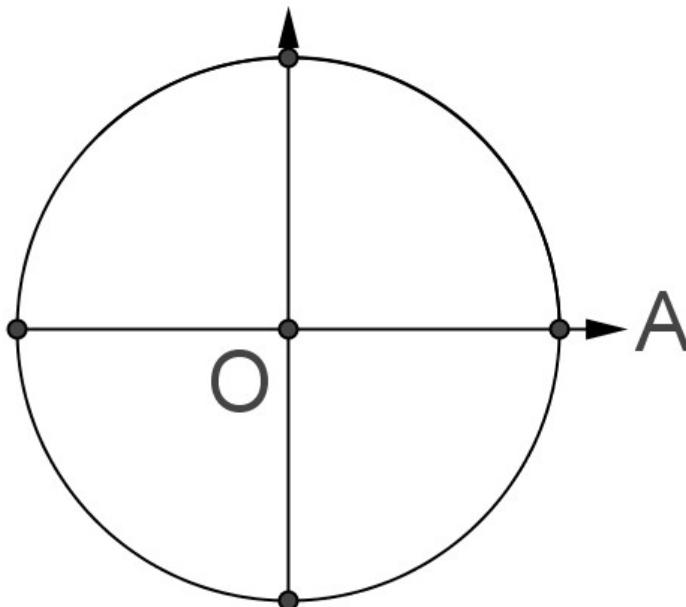
$$\frac{41\pi}{3} \text{ rad} \Rightarrow$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



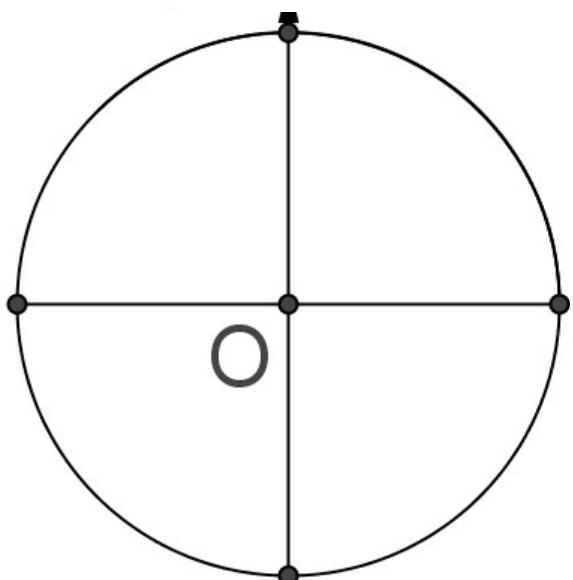
$$\frac{41\pi}{3} \text{ rad} \Rightarrow \frac{?}{3} + \frac{?}{3}$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow \frac{?}{3} + \frac{?}{3}$$

O resultado tem  
que ser **PAR**

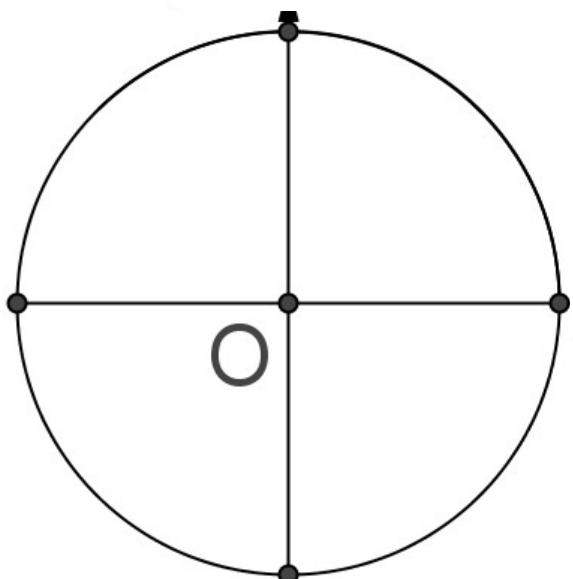


## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow \frac{36\pi}{3} + \frac{?}{3}$$

O resultado tem  
que ser **PAR**

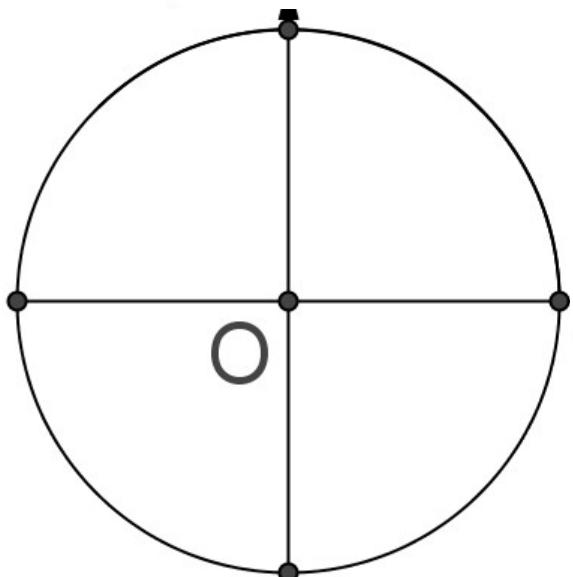


## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow \frac{36\pi}{3} + \frac{?}{3}$$

O resultado tem  
que ser **PAR**

$$\frac{36\pi}{3} + \frac{?}{3}$$

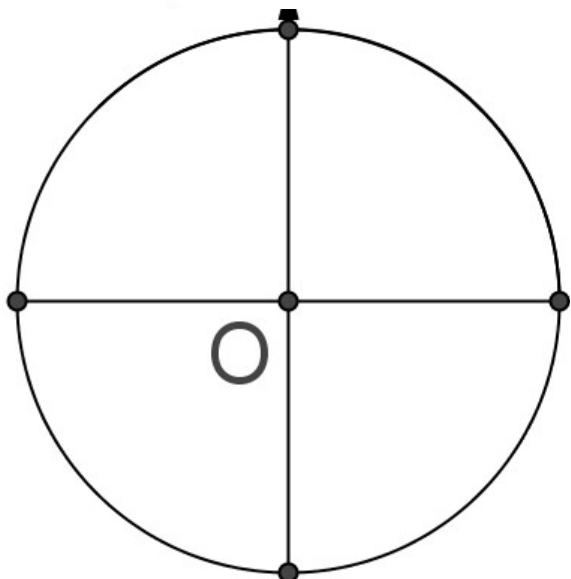
12\pi \text{ rad}

## ATIVIDADE

## Questão 07

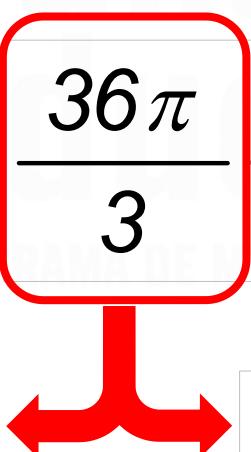
Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow \frac{36\pi}{3} + \frac{?}{3}$$

O resultado tem  
que ser **PAR**



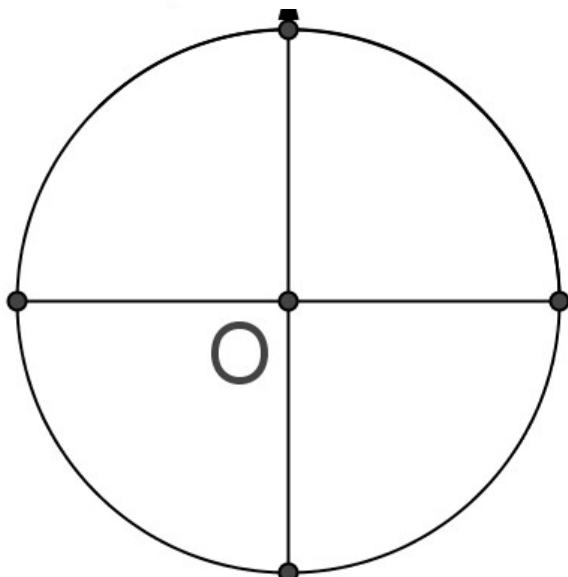
$$12\pi \text{ rad} \Rightarrow 6 \text{ voltas}$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow$$

$$\frac{36\pi}{3} + \frac{?}{3}$$

O resultado tem  
que ser **PAR**

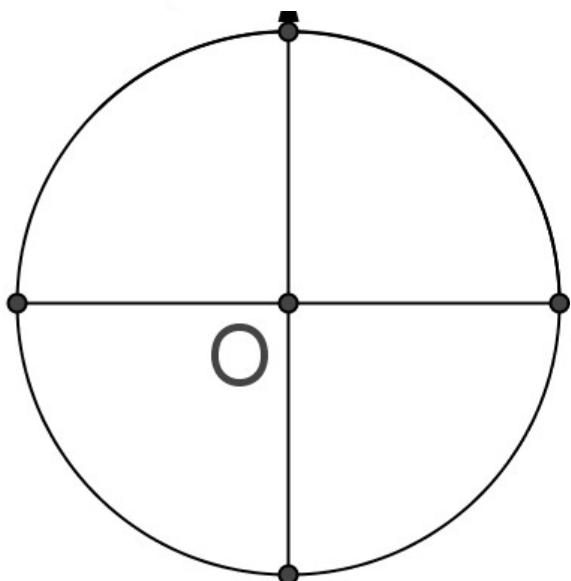
$$12\pi \text{ rad} \Rightarrow 6 \text{ voltas}$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

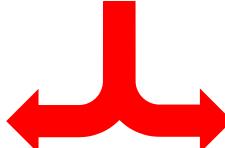
$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow$$

$$\frac{36\pi}{3} + \frac{5\pi}{3}$$

O resultado tem  
que ser **PAR**



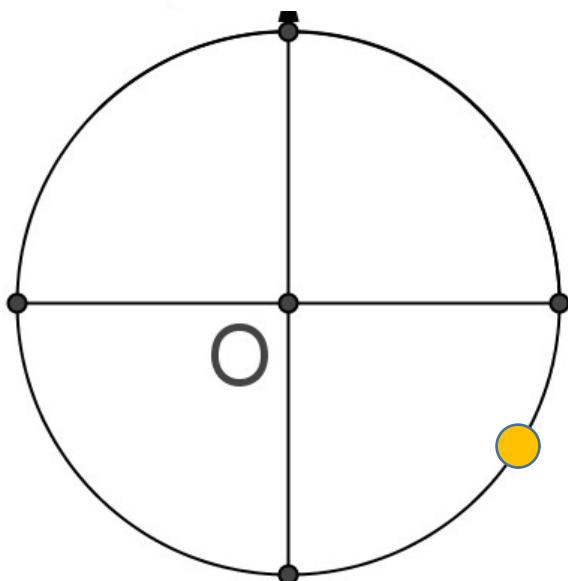
$$12\pi \text{ rad} \Rightarrow 6 \text{ voltas}$$

## ATIVIDADE

## Questão 07

Determine a 1<sup>a</sup> determinação positiva do arco de medida

$$\frac{41\pi}{3} \text{ rad}$$



$$\frac{41\pi}{3} \text{ rad} \Rightarrow$$

$$\frac{36\pi}{3} + \frac{5\pi}{3}$$

1<sup>a</sup> DETERMINAÇÃO (+)

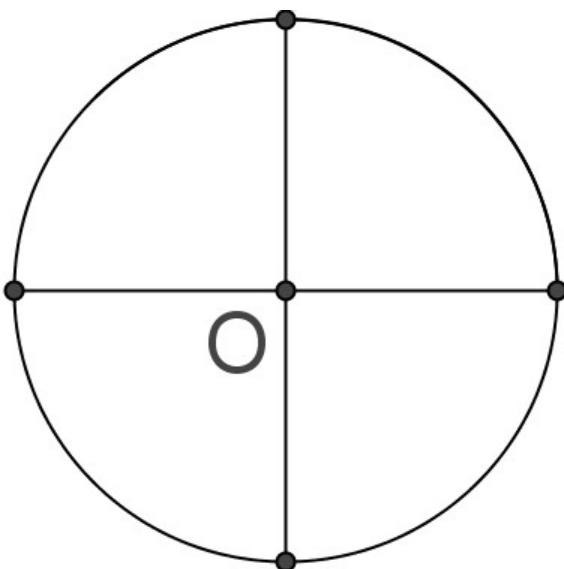
O resultado tem  
que ser PAR

$$12\pi \text{ rad} \Rightarrow 6 \text{ voltas}$$

## ATIVIDADE

## Questão 08

Encontre cinco arcos congruos ao arco de medida igual a  $380^\circ$ .

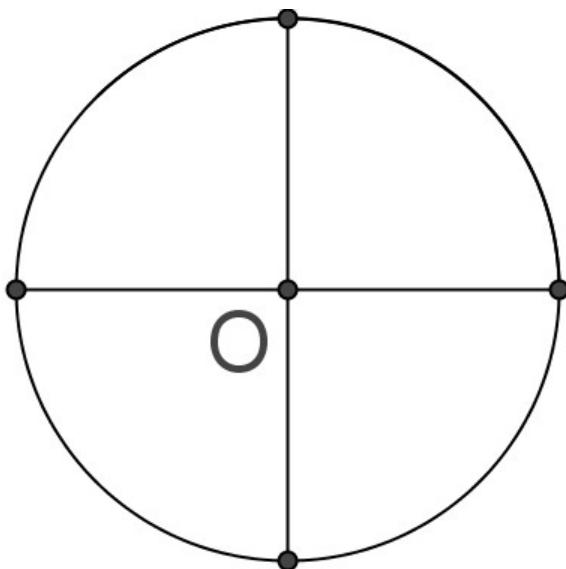


## ATIVIDADE

## Questão 08

Encontre cinco arcos congruos ao arco de medida igual a  $380^\circ$ .

$380^\circ$  |  $360^\circ$



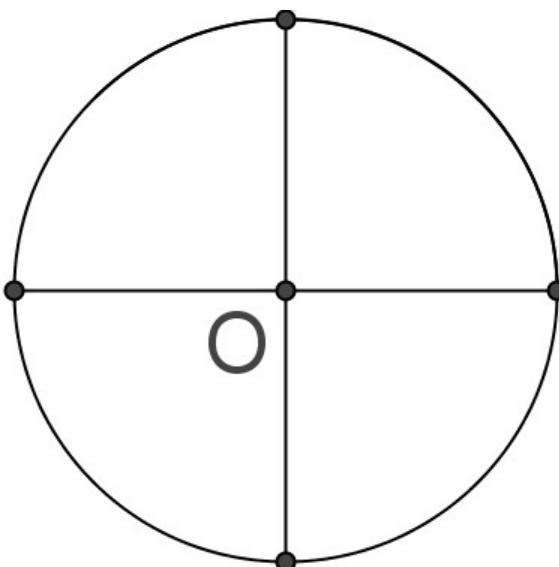
## ATIVIDADE

## Questão 08

Encontre cinco arcos congruos ao arco de medida igual a  $380^\circ$ .

$380^\circ$  |  $360^\circ$

1 volta

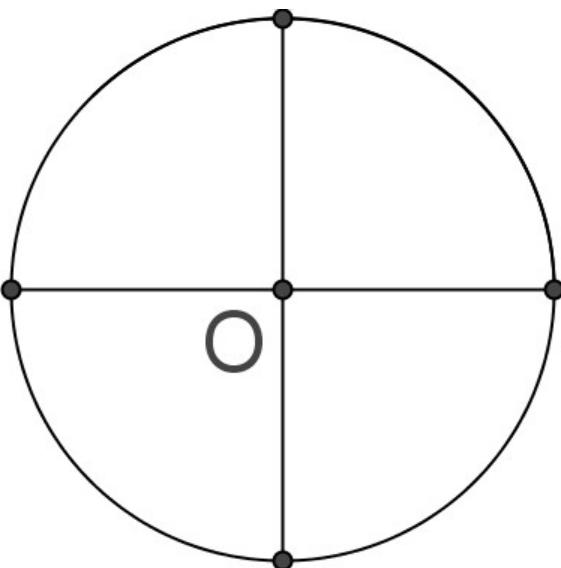


## ATIVIDADE

## Questão 08

Encontre cinco arcos côngruos ao arco de medida igual a  $380^\circ$ .

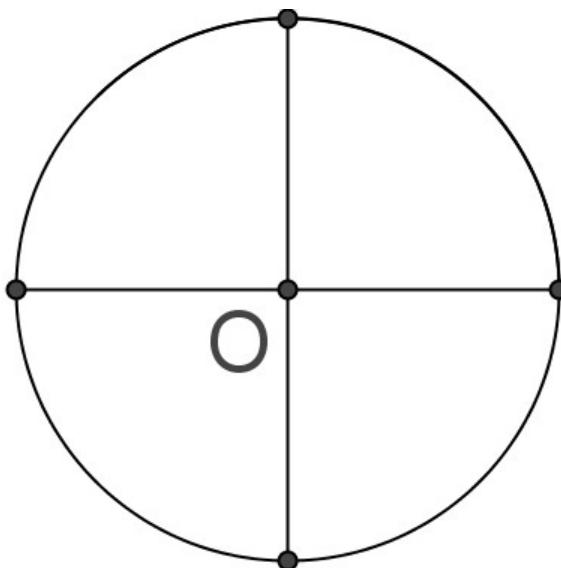
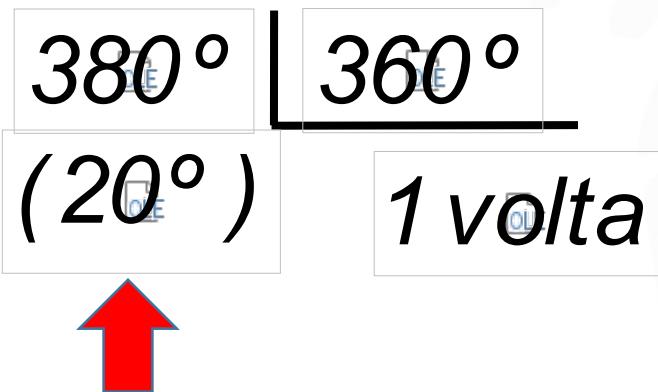
$380^\circ$  |  $360^\circ$   
 $(20^\circ)$  | **1 volta**



## ATIVIDADE

## Questão 08

Encontre cinco arcos côngruos ao arco de medida igual a  $380^\circ$ .



**1<sup>a</sup> DETERMINAÇÃO (+)**

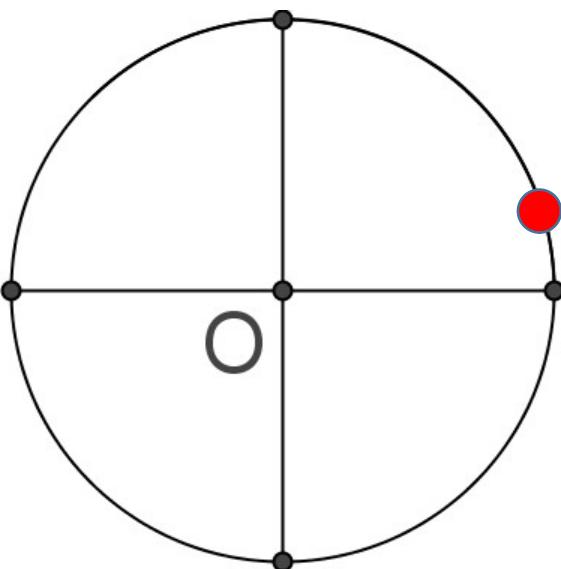
## ATIVIDADE

## Questão 08

Encontre cinco arcos côngruos ao arco de medida igual a  $380^\circ$ .

$380^\circ$  |  $360^\circ$   
 $(20^\circ)$  |  $1$  volta  
↑

1<sup>a</sup> DETERMINAÇÃO (+)



$20^\circ, 380^\circ, 740^\circ,$   
 $1.100^\circ, 1460^\circ, 1.820^\circ$

## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .

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## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .

$600^\circ$

$360^\circ$

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## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .

$600^\circ$

$360^\circ$

1 volta

## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .

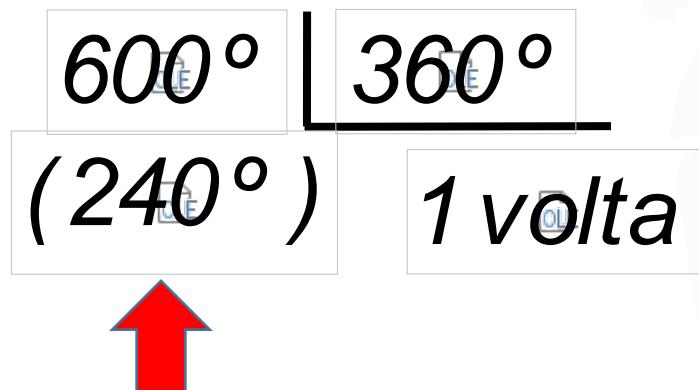
$600^\circ$	$360^\circ$
$(240^\circ)$	1 volta

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## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .

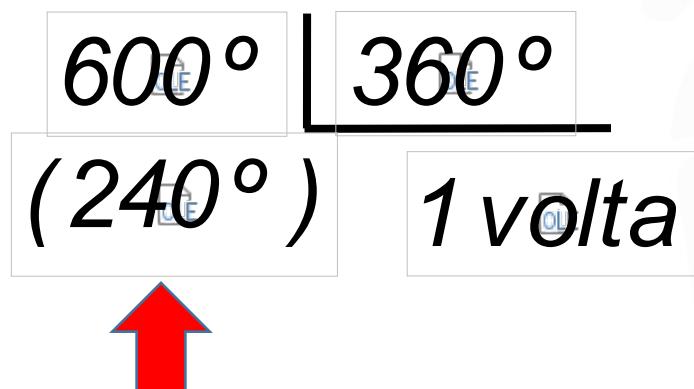


***1<sup>a</sup> DETERMINAÇÃO (+)***

## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .



**FORMA GERAL (GRAU)**

$$\alpha + k \cdot 360^\circ, k \in \mathbb{Z}$$

**1<sup>a</sup> DETERMINAÇÃO (+)**

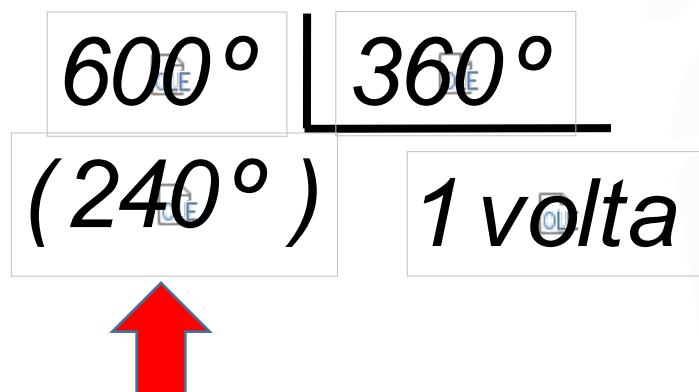
$$k = 0$$

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## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .



**1<sup>a</sup> DETERMINAÇÃO (+)**

$$k = 0$$

**FORMA GERAL (GRAU)**

$$\alpha + k \cdot 360^\circ, k \in \mathbb{Z}$$

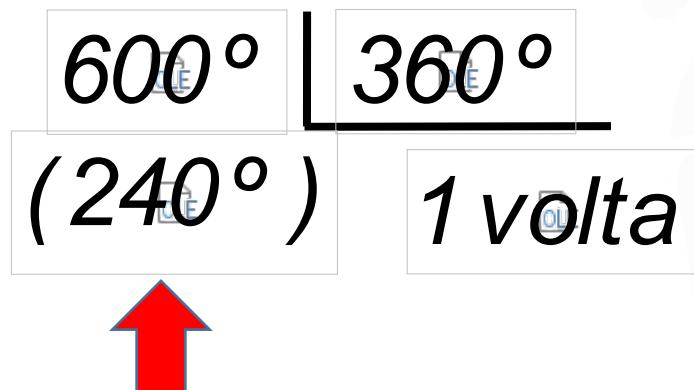
$$240^\circ + k \cdot 360^\circ, k \in \mathbb{Z}$$

PROGRAMA DE REFERÊNCIA FUNDAMENTAL

## ATIVIDADE

## Questão 09

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $600^\circ$ .



1<sup>a</sup> DETERMINAÇÃO (+)

$$k = 0$$

**FORMA GERAL (GRAU)**

$$\alpha + k \cdot 360^\circ, k \in \mathbb{Z}$$

$$240^\circ + k \cdot 360^\circ, k \in \mathbb{Z}$$

**FORMA GERAL (RADIANO)**

$$\alpha + k \cdot 2\pi, k \in \mathbb{Z}$$

## ATIVIDADE PARA CASA

A medida de um arco congrujo (1<sup>a</sup> Determinação positiva) a  $\frac{17\pi}{3}$  Rad é :

A)  $\frac{5\pi}{3}$  Rad

B)  $\frac{3\pi}{4}$  Rad

C)  $\frac{7\pi}{6}$  Rad

D)  $\frac{3\pi}{2}$  Rad

E)  $\pi$  Rad

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## ATIVIDADE PARA CASA

Escreva a **forma geral** dos arcos congruos ao arco de medida igual a  $1410^\circ$ .

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**NA PRÓXIMA AULA**

## *Circunferência Trigonométrica*

- Simetrias;***
- Redução ao 1º quadrante.***

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