

## ÂNGULOS I

Prof.: L. Santos

Data: 21 de janeiro de 2019

**Q1.** Simplifique as seguintes medidas:

(a)  $30^\circ 70'$

(b)  $40^\circ 150'$

(c)  $65^\circ 39' 123''$

(d)  $110^\circ 58' 300''$

(e)  $30^\circ 56' 240''$

**Q2.** Determine as somas:

(a)  $30^\circ 40' + 15^\circ 35'$

(b)  $10^\circ 30' 45'' + 15^\circ 29' 20''$

**Q3.** Determine as diferenças:

(a)  $20^\circ 50' 45'' - 5^\circ 45' 30''$

(b)  $31^\circ 40' - 20^\circ 45'$

(c)  $90^\circ 15' 20'' - 45^\circ 30' 50''$

(d)  $90^\circ - 50^\circ 30' 45''$

**Q4.** Determine os produtos:

(a)  $2 \times (10^\circ 35' 45'')$

(b)  $5 \times (6^\circ 15' 30'')$

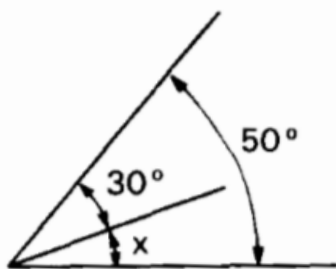
**Q5.** Determine as divisões:

(a)  $(46^\circ 48' 54'') \div 2$

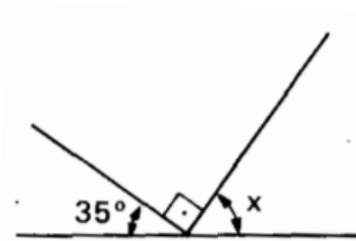
(b)  $(31^\circ 32' 45'') \div 3$

(c)  $(52^\circ 63' 42'') \div 5$

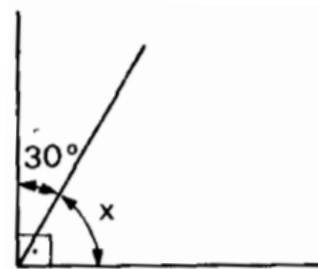
**Q6.** Determine o valor de  $x$  nos casos:



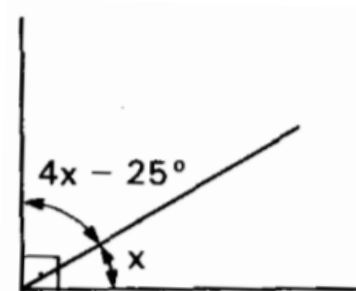
(a)



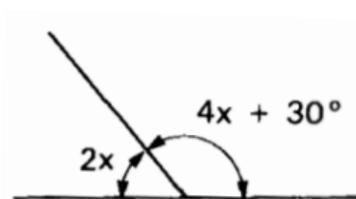
(b)



(c)



(d)

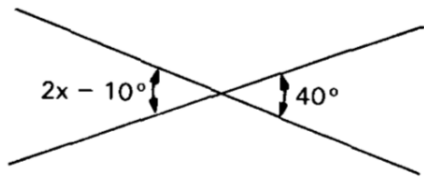


(e)

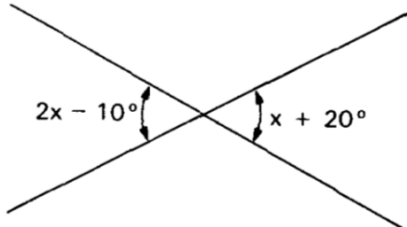
**Q7.**  $Oa$  e  $Ob$  são duas semirretas colineares opostas.  $Oc$  é uma semirreta qualquer. Os ângulos  $\widehat{aOc}$  e  $\widehat{cOb}$  são adjacentes? São suplementares?

**Q8.** Mostre que, se dois ângulos são opostos pelo vértice, então são congruentes.

**Q9.** Determine o valor de  $x$  nos casos:

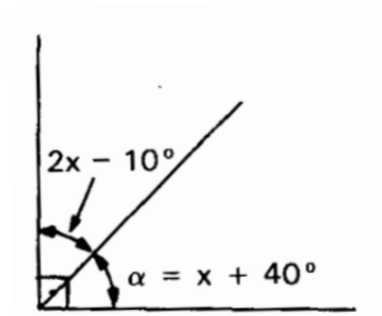


(a)

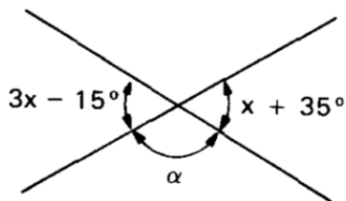


(b)

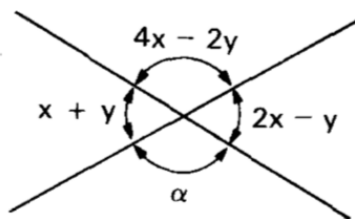
Q10. Determine o valor de  $\alpha$  nos casos:



(a)

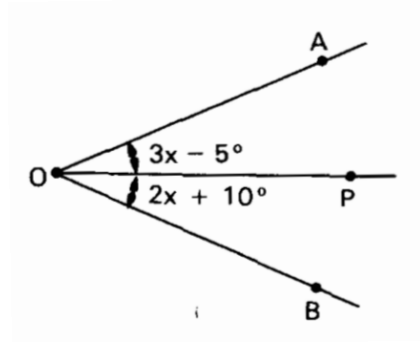


(b)

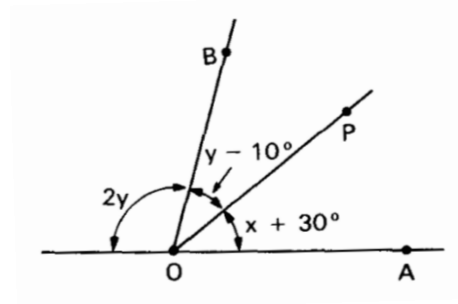


(c)

Q11. Se  $\vec{OP}$  é bissetriz de  $\widehat{AOB}$ , determine  $x$  nos casos:



(a)



(b)

### GABARITO ÂNGULOS I

Q1.

- (a)  $31^\circ 10'$
- (b)  $47^\circ 30'$
- (c)  $65^\circ 41' 3''$
- (d)  $111^\circ 3'$
- (e)  $31^\circ$

Q2.

- (a)  $46^\circ 15'$
- (b)  $26^\circ 5''$

Q3.

- (a)  $15^\circ 5' 15''$
- (b)  $10^\circ 55'$
- (c)  $44^\circ 44' 30''$

(d)  $39^\circ 29' 15''$

Q4.

- (a)  $21^\circ 11' 30''$
- (b)  $31^\circ 17' 30''$

Q5.

- (a)  $23^\circ 24' 27''$
- (b)  $10^\circ 30' 55''$
- (c)  $10^\circ 36' 44,4''$

Q6.

- (a)  $20^\circ$
- (b)  $55^\circ$
- (c)  $60^\circ$

(d)  $23^\circ$

(e)  $25^\circ$

Q7. São adjacentes e suplementares.

Q8. —

Q9.

- (a)  $25^\circ$
- (b)  $30^\circ$

Q10.

- (a)  $60^\circ$
- (b)  $120^\circ$
- (c)  $120^\circ$

Q11.

- (a)  $15^\circ$
- (b)  $10^\circ$